SEPTEMBER 1, 1952 NEWS ISSUE

Electrical World

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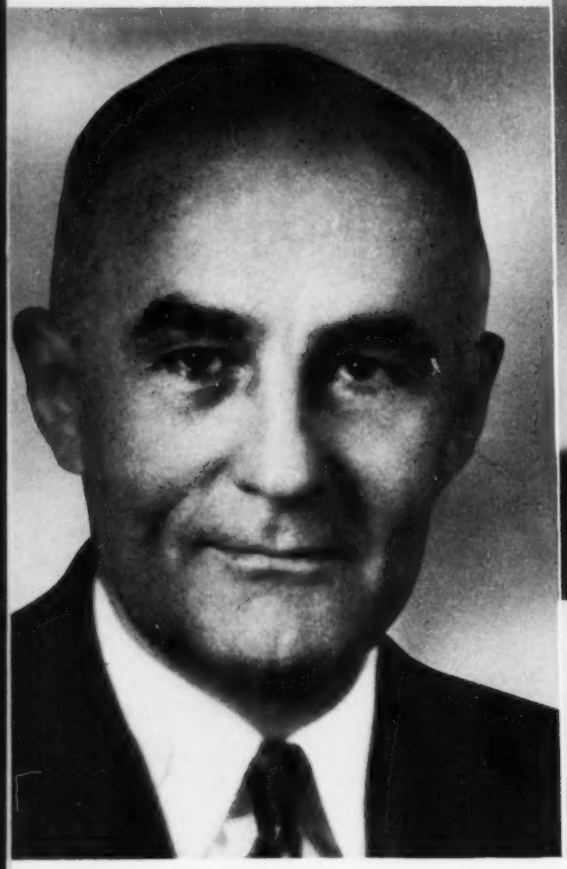
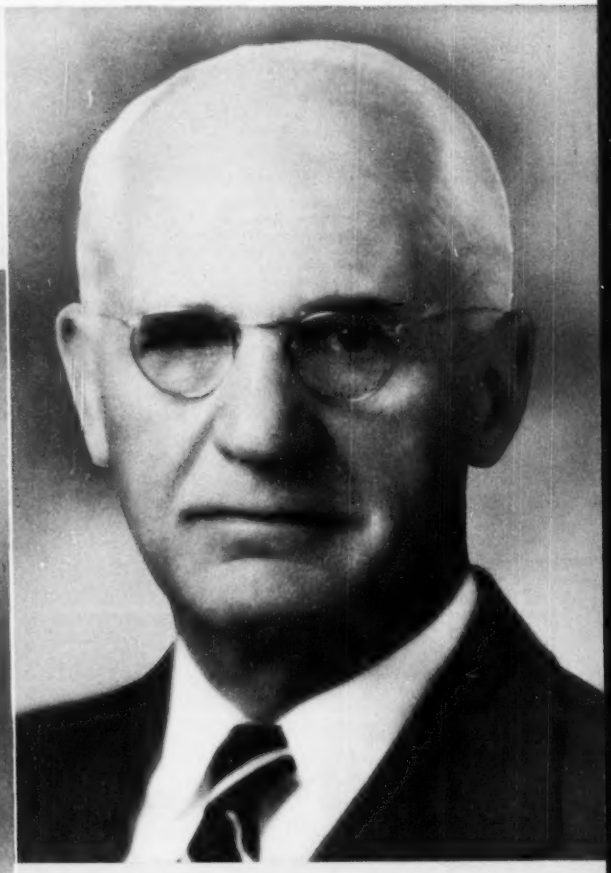
James M. Barry →

becomes chairman of the Executive Committee of the Southern Co . . .





. . . And *is followed* as president of the Alabama Power Co by

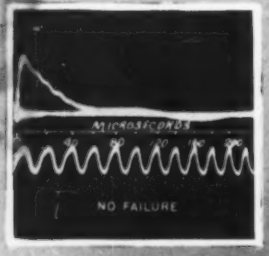
← Lewis M. Smith

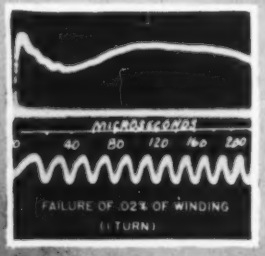
Planting Money to Harvest Wealth . . . Page 32
Food Prices Rising Slowly . . . Page 50

TRANSFORMERS PASS THROUGH IMPULSE TESTING center on conveyor system. Here, equipment is being inspected by M. I. Alimansky (left) and E. D. Treanor of G-E Pittsfield transformer plant. Present facilities can test all single-phase transformers 100-kva and below, with high-voltage windings 18-kv and below, low-voltage windings 600-v. and below.

Production-line impulse testing of transformers—newest contribution to

GREATER SYSTEM RELIABILITY





SENSITIVITY OF NEW IMPULSE TESTING technique in detecting the nature and location of faults is shown in these oscillograms. In actual test operation, warning of fault is given automatically by specially developed electronic circuits. Transformer is rejected if fault occurs.

Insistence on unfailing continuity of service, coupled with constantly growing loads, place a heavy premium on the reliability of today's distribution systems.

Already high, the record of transformer dependability should be even further improved by a new technique of production-line impulse testing now in operation at G-E transformer plants.

Made possible with the advent of the neutral-impedance method of fault detection, the new testing technique subjects the windings to high voltage surges sufficient to reveal even the smallest faults. The test is particularly searching, since it is made without any protective equipment on the transformer, thus assuring that it will stand up under the most severe service conditions. Fault detection is entirely automatic, with warning being given by electronic circuits.

A complete description of this new quality-control technique is given in GER-635, a reprint of a recent AIEE paper. Write to General Electric Co., Schenectady 5, New York. 301-206

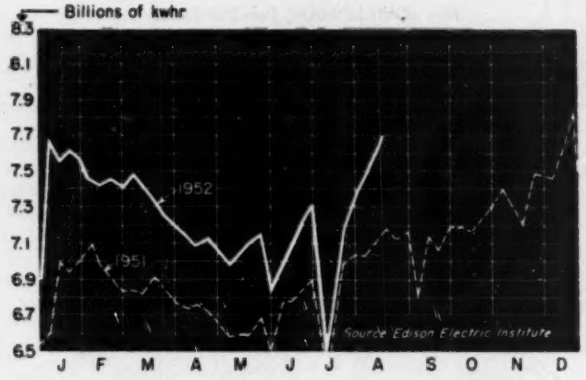
MORE POWER TO AMERICA

GENERAL ELECTRIC

VOLUME 138, NO. 9

September 1, 1952

Electrical World



Output Week Ended Aug. 23—7,718,084,000 Kwhr

Per Cent Change From Previous Year

	Total US	New Eng.	Mid. Atlan.	Cent. Ind.	West Cent.	South-east	South Cent.	Rocky Mount.	Pacific NW	Pacific SW
Aug. 23	+9.1	+7.4	+3.3	+6.4	+14.0	+15.4	+19.0	+9.8	+5.5	+6.9
Aug. 16	+6.5	+5.9	+1.8	+2.5	+10.7	+15.5	+11.4	+9.3	+1.4	+5.0
Aug. 9	+6.0	+6.1	+3.1	+1.3	+7.4	+13.3	+8.7	+12.4	+1.1	+7.9

Electric Power Statistics

		Latest Month	Preceding Month	Year Ago
Peak Loads (Million Kw)	June	67.0*	65.9	62.4
Capacity (Million Kw)	June	77.46	77.01	72.30
Production (Billion Kwhr)	June	31.53	31.82	29.84
Hydro		9.16	9.69	8.02
Fuel		22.37	22.13	21.82
Fuel Consumption				
Coal (Million Tons)	June	7.66	8.01	8.06
Oil (Million Barrels)		3.91	3.72	4.54
Gas (Billion Cu Ft)		89.29	76.99	75.42
Sales (Billion Kwhr)	May	27.94	28.33	26.35
Residential		7.52	7.91	6.68
Commercial		4.74	4.74	4.34
Industrial		13.83	13.85	13.42
Other		1.86	1.83	1.90
Net Income Class A & B Companies ($ Million)	June	69.83	68.24	62.63
Estimated Dec. 52 Peak (Million Kw)	May	80.0	80.2	78.8
Kwhr per Residential Customer (12 Month Average)	May	2,078	2,066	1,909
Revenue per Kwhr Residential Service (12 Month Average)	May	2.78¢	2.79¢	2.85¢
Canadian Production (Billion Kwhr)	June	4.99	5.33	4.71

Business Statistics

FRB Industrial Production Index†††	June	204	212	223
Gross National Product Annual Rate ($ Billion)	1stQtr.	339.7	334.6	319.5
E. W. 5 Industry Production Index	June	96.9*	116.0	123.2
ENR Construction Cost Index††	Aug.	122.7	119.6	113.8
BLS Consumer's Price Index	June	189.6	189.0	185.2
NEMA Insulation Materials, Sales Index†	June	500	517	610
NEMA Electric Appliance Sales Index†	June	258	219	284
NEMA Household Refrig. Sales Index†	June	192	128	154

* Estimated. † 1936=100 †† 1949=100 ††† 1937-39=100 (Unadjusted)

THIS WEEK

The Electrical Week 5
In the Industry 6
Technical Notes 6
Meetings 18
News About People 29
Sales and Service 38
Industrial Relations 40
Financial 42
Manufacturers and Markets 46
Electrical Business Outlook 50

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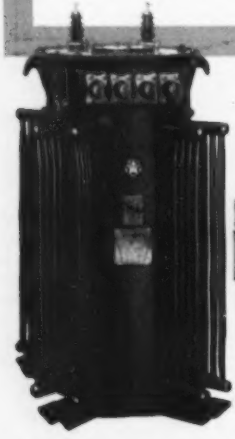
"The POLE STAR requires 60 to 75% less exciting current in all ratings from 3 to 500 kva,"

says JOHN LENHART, Pole Star Tester

Electrical tests made on each and every Pole Star transformer verify John Lenhart's statement. Exciting currents in Pole Star transformers are 60 to 75% less than they were in Pennsylvania's former stacked core transformers. This is true of the 3 to 100 Kva units as well as the larger 167 through 500 Kva sizes.

Exciting Current is the current required to magnetize or excite a transformer core. Since exciting current is present in all transformers — under any load or no load conditions — a certain amount of generating Kva must be earmarked for exciting current and for nothing else. In terms of hundreds of transformers, the cost of producing this generating (re-active) Kva can mount up to large amounts of generating capacity supplying nothing but exciting current and returning no revenue to the Utility. It is good business, therefore, to install transformers with low exciting current because real dollar savings can be achieved. Under any load, less generating capacity would be required; at full load, the Utility will derive more revenue-producing output per unit of generating capacity.



NOTICE TO ELECTRIC UTILITIES:

Catalog No. 352 contains complete information about the new 167 to 500 Kva Pole Stars. Write for your free copy today.

P.S. Let the Pole Star be your guide

Pennsylvania TRANSFORMER COMPANY

CANONSBURG, PA. *Greater Pittsburgh District*

THE ELECTRICAL WEEK

The Issue's News Highlights—Railroad electrification today is economically feasible, Battelle Memorial Institute, research organization, informs Joint Committee of Edison Electric Institute and 19 interested companies. Group suggests standardization on 24-kv, 60-cycle system.

Boiler manufacture is the bottleneck in the country's electrical expansion, EEI Pres Bayard L. England tells mobilization officials.

A behind-the-scenes battle for steel is on in Washington, with AEC demanding top priority for materials going into power plants that will supply its installations.

Washington—Republican Sen Edward J. Thye of Minnesota plans to continue his fight next year for 230-kv transmission lines which Reclamation Bureau proposes to build in southwestern Minnesota . . . Elbert C. Brown, Hartford Electric Light, is a new member of Depa's Power Supply Division replacing C. N. Metcalf, Con Edison.

John H. Kerr Dam (formerly Buggs Island) on the Virginia-North Carolina border will be dedicated Oct. 3 . . . Running test continues this week on the first of four 71,250-kw generators at Reclamation Bureau's Hungry Horse Dam in Montana.

Shortage of heavy cranes used at power plants is another source of trouble for Washington control agencies . . . Mobilization agencies are taking first steps toward drawing up an electric power conservation order for Pacific Northwest. Its issuance depends on hydro conditions in area during next month or two.

On the Political Front—Clyde H. Seybold, president of National Rural Electric Cooperative Association, confers with Democratic nominee Stevenson on co-op problems . . . Stevenson interprets Eisenhower's remarks at Boise, Idaho, hitting government construction of dams as meaning the General disapproves of conservation of natural resources and public power development in West.

Rates—Pennsylvania Power has been granted a temporary increase in industrial rates amounting to about $424,500 yearly by the PUC, effective Aug. 19. The company is seeking a $900,000 general rate increase but was denied permission to put the full amount in effect pending the outcome of the case before the commission.

Heat pumps now in use in American homes are estimated at between 1,000 and 1,500 by a manufacturer of this equipment. The maker further says 1,000 probably will be sold this year, and from 2,000 to 2,500 in 1953.

Earthquake damage to electric power facilities in southern California in the Bakersfield area was slight. Pacific G&E restored service to downtown section of city in 40 minutes and to fringe areas in an hour. Worst damage suffered by PG&E was to an office building, in which windows were broken. Los Angeles Department of Water and Power and Southern California Edison reported no damage from the quakes of Aug. 22 and 23.

Russia's fifth Five-Year Plan, already 20 months old, calls for a rise in electric power output from 90 billion kwhr in 1950 to 162 billion in 1955. Last year's production was 102.6 billion kwhr, according to the Russians. Expansion program consists of increasing capacity at present stations and building new projects, including one on Angara River which might become one of most important in USSR.

Florida Power Corp and Inverness City Council agree on a 30-year franchise. Utility will pay city a 2% tax on gross revenue from energy sold in Inverness for first ten years, 3% for second ten years, and 4% for the last ten. The city also gets a decrease in rates for municipal services.

Labor—Westinghouse offers 60,000 workers represented by IUE-CIO, and UE wage boosts of from 7½ to 13¢ an hour. Proposal is same as one made by GE and rejected by unions Aug. 13. About 15,800 Westinghouse employees in two other unions received same offer, less 1 to 2½¢ an hour which they were granted as cost of living adjustment May 1. If accepted by the unions, increases are effective Oct. 1.

IUE-CIO retains bargaining rights for 13,500 workers at Westinghouse's East Pittsburgh plant. IUE defeated UE, its left-wing rival, by a vote of 6,781 to 4,825.

Regional Wage Stabilization Board approves wage increases for 3,290 employees of three Pacific Northwest utilities. A 9% boost was okayed for 571 manual and 296 office employees of Washington Water Power, a 7.9% hike for 1,468 manual and office workers of Portland General Electric, and a 7.86% rise for 604 manual and 351 office employees of Pacific Power & Light.

Production of power at Bull Shoals Dam near Mountain Home, Ark., begins today when U. S. Senator McClellan throws the switch on the first of four 40,000-kw generators. Power from the unit is expected to be available in about a week. The other units will go on the line at intervals of about one month.

A new charter has been proposed for Tacona, Wash., under which a five-man board would direct the municipal power system as well as the water department and Belt Line RR. The proposal has been approved by a freeholders committee and must be okayed by voters. City Light now is run by a single elected commissioner.

Financial—Although operating revenues of Puget Sound P&L dropped 15% during the first half of 1952 because of loss of revenue from sale of properties, net income was up 1%, Pres Frank McLaughlin reports.

THE ELECTRICAL WEEK

CONTINUED

Controller General Lindsay Warren advises House Interior Committee that the Bureau of Reclamation appears to have overstepped legal bounds in awarding contracts for its Eklutna project in Alaska. The committee asked a ruling when it discovered Reclamation had entered into contracts totalling more than amount authorized by Congress for the project.

Pacific Gas & Electric agrees to wheel Central Valley Project power to Sacramento Municipal Utility District and seven other potential preference customers of the government under terms of wheeling contract with Bureau of Reclamation. All now are customers of the utility.

Tampa, Fla., has an even better street lighting system than EW reported in this column last week. It has a 66-unit, 11,000-lumen system, instead of a 66-lumen installation.

Electric output for the week ended Aug. 23 was the highest for the year so far. Production totalled 7,718,084,000 kwhr and was 9.1% above the figure for the corresponding week a year ago.

IN THE INDUSTRY

Any immediate likelihood that Whatcom County Public Utility District of Bellingham, Wash., would join six other PUD's of the state in purchase of the Puget Sound Power & Light Co appears to have ended. This developed with its retention of W. C. Gilman & Co to make an engineering report on the purchase plan, and refusal by Puget Sound and Guy C. Myers, fiscal agent for the PUD's, to allow Gilman access to records and properties.

The six other PUD's, whose relations with Whatcom never have been cordial, already have discussed proceeding with the $115 million purchase on their own, leaving out the Whatcom County distribution system.

McLaughlin Objects to the Move . . . Puget Power's objection to the Gilman firm was that it had been employed by the company nine years ago, when the company successfully resisted a Whatcom PUD condemnation action. When the company learned that the Whatcom commissioners were considering the employment of the Gilman firm, its counsel telephoned the PUD counsel July 17, advising him of these facts.

"It seems to me highly improper for this district to now hire Mr Gilman as its engineer and for him to accept such employment," said Frank McLaughlin, Puget Power president. "Under these circumstances it is inconceivable that the PUD would expect Puget to make its records and properties available for inspection by Mr Gilman. Puget believes in preserving the integrity of business relationships."

It seems evident that both McLaughlin and Myers regard the Gilman retention, following Puget Power's protest, as the tip-off that the Whatcom PUD is unlikely to participate in the joint purchase plan.

"If the Whatcom district seriously intended to be a participant in an overall acquisition, it would not have employed Mr Gilman," said McLaughlin. "There must be some undisclosed motive, and Puget is not aiding or abetting piecemeal condemnation on the part of any public agency."

Fears Piecemeal Condemnation . . . Although McLaughlin apparently fears a Whatcom PUD attempt to condemn Puget Power properties, the Whatcom commissioners denied any such intention. They asserted the actions of McLaughlin and Myers "are without explanation other than their possible desire to withhold the facts from the public."

Under the proposed purchase plan, Whatcom was to have assumed responsibility for $25 million of the prospective $115 million bond issue by which the seven districts were to acquire Puget Power. Of this share, $15 million was for the Puget distribution system within the county and $10 million for its share in the company's generating and transmission facilities, as well as for working capital.

Conrad Barker, chairman of the Whatcom commission, pointed out that the $115-million valuation of the distribution system is three times greater than the price on which both the Whatcom commissioners and the company had agreed in a contemplated Whatcom purchase agreement in 1945, a deal which fell through when the state supreme court nullified all such "joint contracts" between Puget Power and individual PUD's.

The commissioners said they could not understand "why properties valued at $5 million in 1945 for a county acquisition are now inflated to $15 million in the 'over-all' deal."

The company replied that the appraisal for the $5 million valuation had been made in 1940 and McLaughlin asked "where can anything be bought today at 1940 values?" He also pointed out that the distribution system had been expanded extensively since that time.

With Whatcom out of the group picture, at least for the time being, it looks as though the ball has been dropped in the lap of the remaining six PUD's. They'll probably come up with a new purchase plan—whether it will be more acceptable to McLaughlin and Puget Power remains to be seen.

TECHNICAL NOTES

ARCHER E. KNOWLTON

Firm resistance to preferential treatment is the best way to restore all essential services and then take care of all on an equal basis.

Forced outages of only 1.7 percent have occurred in one plant with 25.7 unit years of 80 Mw reheat turbine experience. The figure embraces boilers and turbines.

Contact area in connectors applied to aluminum conductors should be large enough to minimize the cold flow of the aluminum under pressure.

Shipment limitations are one obstacle to larger turbogenerators and transformers. Technologic hurdles are not insuperable. Incentive is less material in pounds per Mw.

To Make Railroad Electrification Pay

Report to EEI and 19 interested companies shows that while installation costs are higher, operating costs of electrified systems are 17 to 25% below those of steam or diesel

When you talk about electrification to railroad men, the reply you are most likely to get is, "It's nice, but it's not economic."

About four years ago, a group of seven railroads, the Edison Electric Institute, several electrical manufacturers and some coal producers decided to find out whether that blanket statement wasn't just as false as most generalizations. To do this, they formed a Joint Committee on Railroad Electrification.

After a preliminary survey by a working committee, the group asked Battelle Memorial Institute, a research organization, to explore the possibility of overcoming economic and technical obstacles to electrification.

Battelle's report, just made public, dispels some of the gloom over cost of railroad electrification, and suggests there are ways to make it pay.

U.S.A. Standard? . . . Writers of the Battelle report feel the electric railways of the country should be standardized on a system that is most feasible technically and economically.

This system, they suggest, would distribute power to the engine at a contact-system potential of 24 kv, alternating current. This would permit greater spacing of substations and lighter contact systems and supporting structures than are normally used.

To permit static conversion of three phase to single phase, the system would use the standard commercial frequency of 60 cycles for the contact system. Thus, power companies would be able to supply the railroads from existing and planned facilities of the conventional type.

In combination with this distribution system, the report proposes that railroads use traction motors, control equipment, running gear, and other components of diesel-electric locomotives, now in mass production.

To evaluate these suggestions economically, the institute compared the cost of the developments with those for an electrified system using 3,000 v direct current on a 400-mile section of a multiple-track railroad.

If power were purchased, the 24-kv, 60-cycle system would cost $150 million as compared with $167 million for a 3,000-v, dc system, based on 1950 prices. Either of the systems, the report pointed out, "would result in annual savings in operating costs ranging from 17.3% to 25% . . . as compared with either diesel-electric or steam operation, respectively."

Costs Compared . . . Initial capital in-

THE PICTURE: Pennsylvania Railroad's "Broadway Limited", New York-Chicago streamliner, on main line between New York and Philadelphia. System, which operates at 11,000 volts, ac, was electrified in 1935.

vestment to rehabilitate the 400-mile example system would be $77.3 million for steam, $110.6 million for diesel-electric, and $150.0 for the 24-kv, 60-cycle setup.

The lower operating costs and cost-reducing technical improvements could swing the balance in favor of central station electrification, the report indicates.

Although ample supplies of liquid fuels are predicted for the next 20 years, electric power costs may drop as much as 10% below present levels, while diesel fuels are expected to increase by 25 to 50%, the report commented. In the example under study, this and other changes in operating costs would bring about an increase in annual savings for the 24-kv, 60-cycle system over diesel electrification from the presently estimated $3.3 million to between $5.6 and $7.2 million.

The 24-kv, 60-cycle system and a number of other technical developments suggested present problems that would have to be worked out to help make wholesale electrification of railroads appealing.

The Battelle group feels there are also some nontechnical but highly important financial and legal questions that affect the feasibility of electrification. Along these lines, the Institute recommends:

● Formation of a plan for cooperative financing of electrification by insurance companies, banks, interested manufacturers, coal producers and like organizations. The plan is based on underwriting of a part of the investment by those "other-than-financial" organizations which might gain enough from expansion of electrification to warrant assumption of part of the risk.

● Development of data to support changes in legal procedure and legislation in regard to prior mortgages and to the power of bankruptcy courts to foreclose mortgages. These are not now favorable to railroad electrification.

● Development of a plan for an organization that would combine the functions of engineering, design, and construction of electrified railway systems. This organization would be available to all railroads, reducing duplication of effort and costs.

The working committee of the 20-company group has accepted the Battelle report "as indicative of the current economy to be derived from electrification of a railroad with heavy density traffic."

The committee recognizes that it would be desirable to standardize the country's electric railroad systems, but feels sufficient data are not available to warrant recommendation of any specific system. For this reason, it recommends installation of a 60-cycle system on a trial basis. This, the group said, would contribute materially toward determination of a practical standard.

As a result of the Battelle report, the Joint Committee will continue its study of further railroad electrification.

Possible Action by BPA Tied to Seattle Inquiry

The possibility that Bonneville Power Administration might build a $4.5 million receiving substation which Seattle City Light is preparing to build itself is advanced as one reason for an investigation of City Light by Mayor Allan Pomeroy. The inquiry was begun recently but Seattle's mayor has been silent on its purpose (EW, Aug. 11, p 113).

Under BPA's policies, City Light "is entitled" to receive power from the Bonneville 230-kv grid at the city's operating voltage of 26 kv. However, no funds presently are available for such construction. So completion of such a project by BPA could not be expected until the fall of 1956. Nor would Bonneville build the reserve capacity that City Light wants for the city's South End industrial district.

E. R. Hoffman, City Light superintendent, feels that early construction of the substation is imperative, since the present South End substation is near Boeing Field and has been endangered several times by airplane crashes.

"A crash into South substation without reserves elsewhere would be a catastrophe of possible tremendous proportions, cutting off electric supply for as long as a year," says Hoffman.

"City Light can build the new Duwamish substation at least a year before BPA can because we can proceed immediately," the superintendent commented.

Hoffman sees a third substation, still farther south, as an early development in which BPA aid might be expected.

Mayor Pomeroy, although making no statements, would like to see the Duwamish substation constructed in part with BPA funds, if possible. A stalwart Democrat, he could expect cooperation from a Democratic national administration, contingent upon victory at the polls in November.

Public vs Private Power Likely Issue in PUD Vote

The old battle of private versus public power is expected to be an issue in the selection of two PUD commissioners at Yakima, Wash., in the November general election.

Expected to be a candidate to succeed himself will be Ed N. Roady, a supporter of public ownership. No candidates have been announced for the position formerly filled by the late Rudy Huettner, who was a foe of public power.

Heuttner's post has been unfilled because of the inability of Roady and Dan McDonald, holdover member of the present commission, to agree on a successor. McDonald is considered an opponent of public ownership of utilities.

The Yakima PUD has been virtually inactive ever since it was established in the 1930s. At one time, two public power advocates were on the commission and tried to activate the PUD but private power supporters gained control in the next election. The area presently is served exclusively by the Pacific Power & Light Co, with headquarters at Portland, Ore.

To become a candidate, a person must be nominated by petitions signed by 100 qualified voters. These petitions must be filed with the county auditor between Sept. 5 and 20.

Steam Unit Rescheduled

Central Maine Power Co has rescheduled installation of a new 30,000-kw steam unit at Mason Station in Wiscasset from next spring to this December to serve winter peak in the event hydro conditions are unfavorable before the freeze-up.

The unit will give the plant a total capacity of 100,000 kw, making it Maine's largest single source of electrical generation.

Boiler Shortage Is Bottleneck...

. . . in utility power expansion program, Bayard L. England, EEI president, tells top mobilization officials

Failure to meet boiler production schedules prior to the steel strike has been the major bottleneck in the electric power expansion program, Bayard L. England recently wrote top mobilization officials.

The president of Edison Electric Institute and Atlantic City Electric Co warned that unless positive steps were taken to make certain necessary materials available for manufacture of power equipment, there will be further delay in completion of generating stations scheduled to go on the line in 1953 and 1954.

Letters to 5 officials . . . The letters were sent to Henry Fowler, head of National Production Authority and Defense Production Administration; James F. Fairman, Defense Electric Power Administration chief; James Colvin, director of NPA's Engine & Turbine Division; Franz Stone, deputy director of NPA; and John R. Steelmen, acting director of mobilization.

England said investigations by EEI's Electric Power Survey Committee revealed that the four major boiler manufacturers shipped boilers with a total capacity of 35.8 million lb of steam per hour in the first six months of 1952. This, the EEI president said, represented only 64% of capacity scheduled as of Jan. 1, 1952 for shipment during the first half of '52 and only 88% of the capacity scheduled for shipment during the same period on order boards revised as of April 1, 1952.

Effect of strike . . . The steel strike has aggravated the shortage still further, England stated. The prolonged tieup is expected to result in a further loss in capacity of between 15 and 25 million lb of steam per hour before the end of the year. Unless boiler manufactuers get the steel they need quickly and supplies are maintained at a high level the situation will become even worse, England told the mobilization officials.

Advice from the Head Electrical Engineer

Fourteen-year-old Ray A. Jones, right, read the American Institute of Electrical Engineers was holding its Pacific General Meeting in Phoenix, Ariz., his home town. He stopped in to find out how to become an EE. AIEE Pres Donald M. Quarles, left, noting the engineer shortage would be with us for some time, welcomed the chance to recruit.

Army Engineers Will Help Repair Flooded Facilities

Faced with a court action which seeks to prevent them from impounding water behind Albeni Falls Dam on the Pend Oreille River near Sandpoint, Idaho, representatives of the Army Corps of Engineers have promised city officials they will help restore the city's sewage disposal and recreational facilities flooded by the rising water.

The engineers explained that the water behind the dam went up faster than they had expected and they weren't completely ready for the rise.

Col Emerson Itschner, North Pacific division engineer, told the officials the engineers previously had rejected plans for a sewage treatment plant because they believed there was no legal justification for the government to share the cost. This was because the city did not then own the land on which the plant was located. Now that the city has title to the land, the government can help, Itschner said, either by providing facilities or paying an equivalent sum.

Addition Nearly Ready

A 50,000 kw addition to the Cleveland Municipal Light Plant is expected to be in operation by the early part of next year. The building is almost completely finished and one of the two 25,000 units is expected to be installed by Nov. 1. The new units will increase the plant's capacity to 137,500 kw. Next year the municipal plant will extend its transmission system to new Nottingham water pumping station.

Standardization Studied

Proposals for standardization of electric power cyclage throughout Brazil were discussed at a recent meeting of the Sao Paulo Federation of Industry. The country now uses both 50 and 60-cycle current.

AEC and Depa Bump Heads Over Steel

• Commission wants top priority for materials that will go into power plants supplying its installations.

• Claimant agency contends such a priority would upset the country's whole power expansion program.

A tough, behind-the-scenes battle that could have a telling effect on the electric power expansion program is moving toward a showdown in Washington.

In essence it is a battle for steel, intensified by the two-month steel strike which ended early last month.

Atomic Energy Commission, which needs an additional 6.3 million kw of electric power by early 1956, wants top priority for materials that will go into the power plants serving its installations.

Defense Electric Power Administration, materials claimant for all electric utilities, argues that such priority will disrupt the whole power expansion program and unduly delay construction of plants which are to serve other defense needs.

The AEC schedule might be met with the rigid priority system, Depa concedes, but it would be at the expense of other projects already approved as vital to the nation's defense program. If an AEC priority is envoked, continues Depa, it will result in the addition of less total capacity for the country than would otherwise be possible.

Rejoinder . . . But AEC counters that there can be no delay in getting its new projects into operation. It points out that Defense Production Administration, top material controls agency, has set aside a large amount of the steel now being produced for AEC use. Since electric power availability is the controlling time factor in bringing new atomic energy plants into operation, continues AEC, why not use the steel priority to get the power plants underway?

This hot question came in for discussion at the Aug. 15th meeting in Washington between AEC, Depa and companies and government agencies which are to supply AEC power requirements. At that time Depa turned thumbs down on the idea, and AEC did not press for the priority.

National Production Authority, claimant agency for electrical equipment manufacturers, apparently sided with Depa. Tennessee Valley Authority, one of AEC's major power suppliers, tagged along with AEC but did not call for a showdown.

However, AEC and TVA officials met again last week in Washington and were believed ready to force a decision.

There is a chance that this time NPA will join with AEC. A look at tentative first quarter 1953 steel allotments has convinced some NPA officials that priorities are needed if AEC is to get power to meet its plant construction schedule.

Alloys Needed . . . The disputed steel is of all types, but those needed most are the alloy steels that go into huge turbo-generators and boilers. For the first three quarters of this year, most of the heavy equipment manufacturers have received what they asked for, but had trouble cashing in their third quarter tickets on schedule. Fourth quarter allotments are running roughly 80% of requests, and there is plenty of difficulty in cashing them. Tentative allotments for first quarter of next year appear to be down to 60 or 70% of requests—which means that heavy equipment manufacturers may have some more material trouble ahead.

With low allotments staring them in the face, some NPA officials are ready to grasp at any straw to keep the heavy equipment coming out of plants. They see the AEC priority program for power equipment as one such straw.

Depa, while still sticking to its original argument, is also searching for some alternative. It is now working on a plan to extend priorities to materials needed for a number of vital power plants—not just for AEC suppliers.

One rule-of-thumb method used to describe the probable situation is this:

Under present conditions, the two-month steel strike set back power expansion about four months. If AEC uses its priority to meet its own power needs, the general expansion program may be set back six to seven months.

Considering the entire economy, Depa appears to be on sound ground in demanding orderly scheduling of the power units to meet AEC needs. But there is a question as to whether the Depa argument can outweigh the public and political appeal of AEC.

One federal official sums it up this way: "I've been around this man's town long enough to know that AEC gets what it wants—when it wants it."

Isaac C. Jeffrey . . .

. . . will set up office within Depa to coordinate action on AEC power requirements

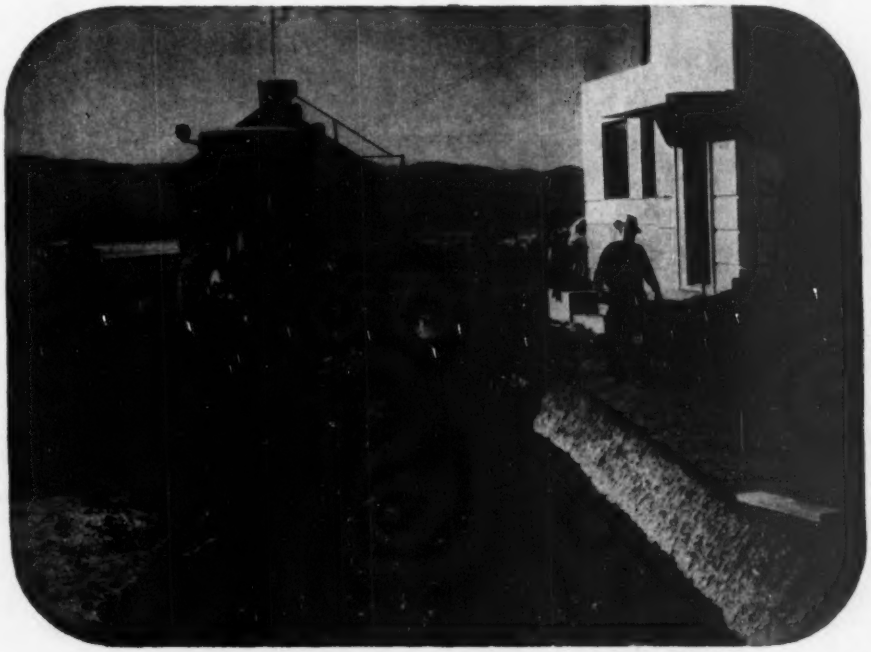
Growing power requirements of the Atomic Energy Program have moved Defense Electric Power Administration to set up a special office to coordinate its part of the program.

This office, manned by Isaac C. Jeffrey, is the responsibility of Donald F. Kigar who heads Depa's Materials and Equipment Division. In his new position, Jeffrey is serving as a special assistant to Kigar.

Creation of the office followed a recent meeting between officials of Atomic Energy Commission, Depa and various agencies and companies supplying the AEC power needs. Because of the size and importance of AEC power requirements it was felt that Depa's responsibilities should be centered in single office.

In this way, it is hoped Depa will be able to expedite schedules for new generating capacity to serve AEC plants.

PARKWAY CABLE



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ROEBLING'S research staff is continually working at the job of product development. Our manufacturing facilities and techniques are constantly improved. That's why our Parkway Cable for distribution and general power supply circuits is today even more dependable than ever before.

Roebling Parkway Cable saves money right from the start because it is buried directly in a shallow, low-cost trench. It is made in single and multiple conductor – solid or stranded – in a range from 600 to 5,000 volts . . . furnished with metallic armor or a non-metallic *Roeprene* sheath, depending on the physical protection required. Types that pass all C.A.A. requirements for Specification No. L-824 for airport lighting are also available.

Large quantities of Roebling's full line of electrical wires and cables are needed in the rearmament program. We and our distributors will do everything possible, however, to meet your requirements. John A. Roebling's Sons Company, Trenton 2, N. J.

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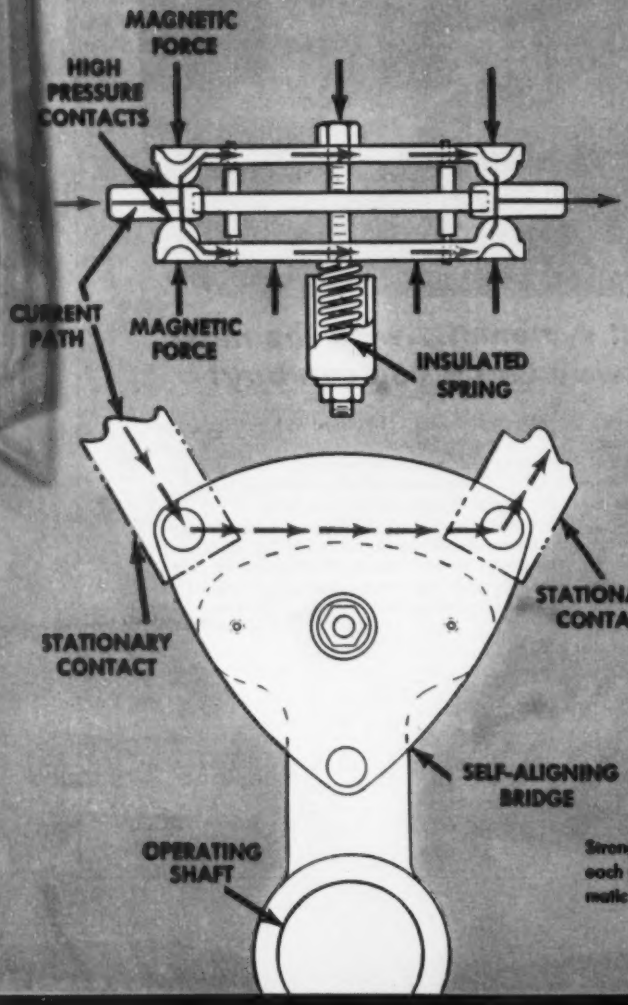
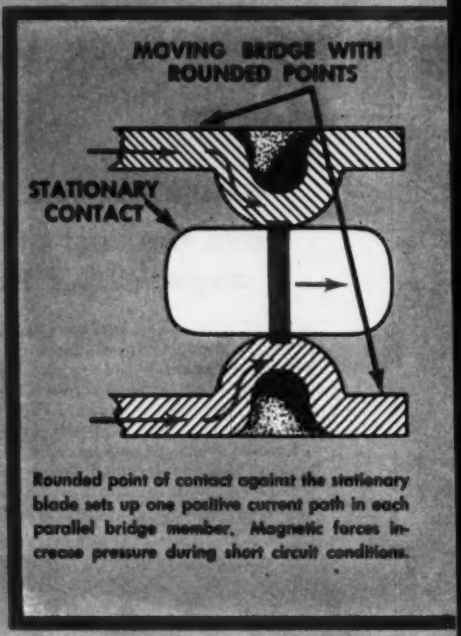
ATLANTA, 934 AVON AVE • BOSTON, 51 SLEEPER ST & 5 PITTSBURGH ST • CHICAGO, 5525 W. ROOSEVELT RD • CINCINNATI, 3253 FREDONIA AVE • CLEVELAND, 701 ST. CLAIR AVE, N. E. • DENVER, 4801 JACKSON ST • DETROIT, 915 FISHER BLDG • HOUSTON, 6216 NAVIGATION BLVD • LOS ANGELES, 5240 E. HARBOR ST & 120 S. HEWITT ST • NEW YORK, 19 RECTOR ST • ODESSA, TEXAS, 1920 E. 2ND ST • PHILADELPHIA, 230 VINE ST • PITTSBURGH 1201 CLARK BLDG • ROCHESTER, 1 FLINT ST • SAN FRANCISCO, 1740 17TH ST • SEATTLE, 900 1ST AVE S. • ST. LOUIS, 3001 DELMAR BLVD • TULSA, 321 N. CHEYENNE ST • EXPORT SALES OFFICE, TRENTON 2, NEW JERSEY

new tap changer design

MAINTAINS TRUE CONTACT ALIGNMENT



Strong, flexible spring action maintains equal pressure on each corner of the triangular bridging parts for perfect automatic tap changer alignment.



Rounded point of contact against the stationary blade sets up one positive current path in each parallel bridge member. Magnetic forces increase pressure during short circuit conditions.

Uses New Contact Principle to Assure Cool, Long-life Operation on Allis-Chalmers Power Transformers

HERE'S A NEW TAP CHANGER for de-energized operation, using a new contact principle that keeps it cool in operation and extends operating life. Designed for use on Allis-Chalmers power transformers, the tap changer meets the approval of utilities which have sought an improved tap changer performance. It helps Allis-Chalmers power transformers do a good job better.

Here's How It Operates

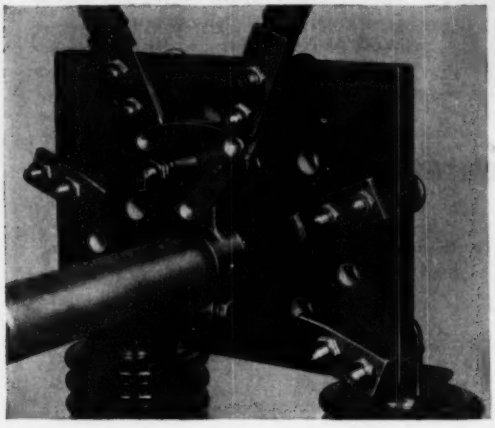
A positive, fixed current path established under high unit pressure is the basic design principle of the new tap changer. Two sets of rounded contact points establish a low-resistance path when they meet the flat stationary contacts on the tap changer panels. A strong wiping action thoroughly cleans contacts whenever tap positions are changed. And elimination of carbon formation adds years to tap changer service life and lowers contact resistance.

Equal Contact Pressure

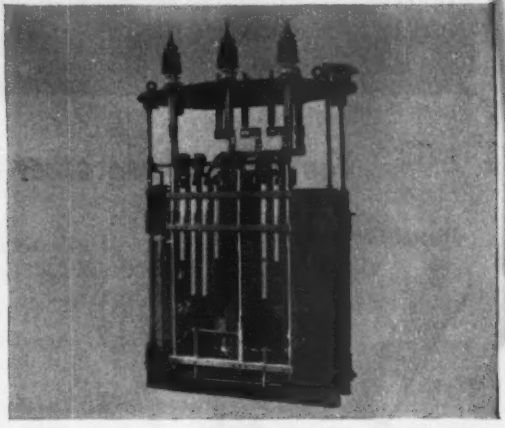
The movable contact bridge is designed so that the current travels through parallel members between the stationary contacts. This creates magnetic forces that prevent "throw open" action when a short circuit occurs on the system.

To maintain equal pressure at points of contact, flexible spring action operates between fixed limits. And the self-aligning bridge arrangement assures automatic and true alignment for each operation.

If you haven't seen the technical sheet describing the tap changer in greater detail, get one from your local A-C representative today or write Allis-Chalmers, Milwaukee 1, Wis.
A-3715



Rounded edges and insulated parts of the tap changer assembly reduce voltage stresses and minimize corona. Oil leakage holes prevent air pockets around mounting bolts.



The new tap changer is easily accessible for periodic inspection through the cover handholes. Tap positions are changed in all phases simultaneously.

ALLIS-CHALMERS

"Easiest fuse to renew I ever used. It's G-E"

"Only three pieces to handle—plus the link—when I renew blown links in this new General Electric time-delay fuse. It's a well-made, sturdy fuse, too. I like the ribs on the cap—they give a better grip than knurling. You can tell at a glance which end comes off."

You'll like these other features of G-E fuses too

General Electric makes them all

One-time fuses: All standard ratings from 3 to 600 amp. Available for both 250V and 600V service.

Renewable time-delay fuses: All standard ratings from 3 to 600 amp. Available for both 250V and 600V service.

Plug fuses: Transparent-top plug fuses. 3 to 30 amp, 125V.

All G-E fuses are listed by Underwriters Laboratories, Inc.

1. All contact surfaces on renewable fuses are silver-plated to eliminate heat caused by oxidation.

2. Newly designed links give accurate and consistent time-delay.

3. The simple three-piece construction applies to ferrule type fuses, too. This fuse has a patented hinged contact plate—no washers to drop.

For complete data, address Section D41A-227, Construction Materials Division, General Electric Company, Bridgeport 2, Conn.

You can put your confidence in—

GENERAL ELECTRIC

Slab 'Road' . . .

. . . was built across swamp by Potomac Edison so a section of a 132-kv line could be strung

Potomac Edison Co had to go into the road-building business to complete a section of a 48-mile, 132-kv transmission line being constructed between a new power station at Albright, W. Va., and a terminal substation at Ridgely, near Cumberland, Md.

The line crosses the Allegheny Mountains and rugged terrain was expected. But Piney Swamp, a soggy area consisting of several feet of water and mud topped by several more feet of matted vegetation presented an additional hazard. Swamps of this type are not often found in the area. Neither are panthers, but one was seen in the swamp, adding to the anxiety of getting across it in a hurry.

Construction trucks trying to cross the swamp bogged down completely. A man walking with care could just about make it across.

Then Potomac Edison's construction superintendent, W. E. Petry, conceived the idea of laying a road of wood slabs to support the trucks. The slabs are waste produced by a number of sawmills operating in the surrounding mountains. At first the sawmill operators were happy to give the slabs away, but after 20 truck loads had been hauled away, they began charging $3.00 a load for them. In all the 1,400 ft road required 40 truck loads.

Although squishy and unulating, the road served its purpose during erection of structures and stringing conductors and lightning shield wires.

The 132-kv line, which will cost $1 million to build, is progressing on schedule and should be completed in about a month.

POWER BRIEFS

● Southwestern Gas & Electric Co will install an additional 60,000 kw unit at its Knox Lee power plant. The unit, with a capability of 75,000 kw, is expected to go into operation by 1955. It will bring the plant's total capability to 180,000 kw.

● Boston's discarded gas light poles are selling like hot cakes for 19th century souvenirs. A wrecking firm gets $25 a piece for the poles which are being set up in patios and yards. In six years gas street lamps have decreased from 9,500 to 4,000.

● Construction work on Cleveland Electric Illuminating Co's Eastlake Plant lagged a bit during the steel strike. The company didn't have any steel for seven weeks but started to get shipments again Aug. 5. Structural steel was the bottleneck. CEI hopes to make up this lag later in the year. Overall construction schedule hasn't been affected materially, CEI has announced.

● Any mother in the U. S. giving births to twins on Sept. 23 will get a welcome and much-needed present. Westinghouse Electric Corp will give her a set of "laundry twins"—an electric dryer and an automatic washing machine. The give-aways are part of the company's new promotion campaign.

● Portland General Electric Co is renaming its hydroelectric plant at Willamette Falls, Oregon City, the T. W. Sullivan Plant. The hydro plant is undergoing a $2.5 million expansion program which will boost production from 5,000 kw to 15,000 kw. Sullivan was PGE's hydraulic engineer for 50 years until his death in 1940.

● The New Zealand government is considering the appointment of a special team of overseas power experts, including Americans, to investigate and report on New Zealand's hydroelectric position and future needs. A move also is reported for establishment of a state hydroelectric department independent of the Ministry of Works and the Treasury.

● Defense Producton Administration has given Florida Power & Light Co the go-ahead to proceed with expansion at the Riviera Plant to add a new 75,000 kw unit. The unit is scheduled to go on the line in the fall of 1953. This is the second unit for Riviera. The company will construct a 66-kv line from Riviera to Ft. Lauderdale to tie into the system network.

Do You Know These Stockholders?

The following persons are shareholders of Commonwealth & Southern Corp still sought by the holding company so it might turn over to them $6.78 for each share of stock they hold. If you have any information concerning their whereabouts, contact Electrical World. The addresses given are the last known, and in many cases are quite old.

Mrs Elizabeth Cockcroft, 545 West 150 St, N. Y., N. Y.
Miss Lillian I. Ferguson, 7 Lorne Terrace, Halifax, N. C.
Miss Madeline Wike, 700 South Westmoreland Ave, Los Angeles, Cal.
Charles Fredrick, 4125 Hawthorne St, Dallas, Tex.
Mrs Anne L. Sutton, 435 E 1st St, Salt Lake City, Utah.
George Diener, 570 Shotwell St, San Francisco, Calif.
Merton Fred Ticknor, Greenacres City, Fla.
Casmiro M. Valdez, 86 South Perry St, Pontiac, Mich.
Henry J. Myers, 88 Bayswater, East Boston, Mass.
Edmund L. Bening, 910 W 13 St, Oklahoma City, Okla.

Dan Eisenberg has spent 28 years looking for missing persons and now . . .

He's Helping Money Find Its Owners

Elusive stockholders of Commonwealth & Southern Corp don't stand much of a chance of staying lost with Dan Eisenberg on the job.

The utility holding company, under liquidation by order of the Securities and Exchange Commission, hired the expert finder of missing persons a little over a year ago to track down 7,200 "lost" stockholders who are entitled to share in a $6-million distribution of C&S assets. To date he's found close to 85% of them (or their heirs) and dropped about $4.7 million into their laps. At the end of July 191,000 shares still were trying to catch up with their owners.

Diligent Search . . . Commonwealth & Southern turned to Eisenberg and the firm he heads, Tracers Co of America, to round up its errant share owners when its own efforts at locating them fell short. Following SEC's instructions in 1949 to make a diligent search for the stockholders, C&S placed ads in papers throughout the country, sent out letters, and contacted investment houses, banks, and brokers. With many thousands of stockholders still in the ranks of the missing, the public utility holding company put the matter into the hands of the professional finders.

Eisenberg has spent more than a quarter of a century looking for missing persons—hotel skips, wife deserters, long-lost relatives, and missing heirs. During the past five years his organization, with headquarters in New York, has branched out to look for stockholders who for one reason or another have lost contact with the companies in which they are part owners. He has done other jobs in this line for such utilities as California Pacific Utilities Co, Iowa Publice Service Co, and Public Service Co of Indiana as well as big manufacturing firms like Phelps Dodge Corp and Armstrong Rubber Co.

Wide Investigation . . . The search for the C&S stockholders so far has required investigation throughout the United States, Canada, and 15 foreign countries. Eisenberg works with a small staff of his own men and employs the services of thousands of tipsters to track down the stockholders. He sets $5 for each stockholder found.

Just how do you go about looking for a missing stockholder? Eisenberg wasn't very communicative on this point. "I don't want to give away any trade secrets," he said with a coy smile.

It is no secret though that he locates a good number of them by looking through city and telephone directories with which his office overflows. He turned up 1,500 stockholders in the first 30 days of his search mainly through this method.

Eisenberg was more willing to talk about how stockholders get lost and turn their backs on money coming to them. In a good many cases, he said, a man would buy stock in a firm without telling his wife. This was particularly true in the days when there was little regulation of stock market activities and many people considered buying securities risky business.

Upon the man's death, the family would know nothing of his stock holdings and would make no inquiries about them or would not

notify the company in case of change in address.

Occasionally, it happens, Eisenberg said, that the wife has bought the stock without her husband's knowledge.

A limited understanding of stock market operations is another reason for shareholders getting lost, Eisenberg said. A number of them said they thought the stock was worthless when they couldn't find it listed in the stock quotations carried in newspapers.

Clerical errors committed in sending out stockholder notices account for still other share owners with whom the company loses touch.

Small Holdings . . . The average holding of the missing share owners is small. Those found before Oct. 1, 1951 received shares of Southern Co and Ohio Edison Co, former C&S operating companies, in exchange for their C&S stock. Since then C&S stock is being redeemed for $6.78 a share. Shareholders not turned up before Oct. 1, 1954 are out of luck. At that time when the company will pass out of existence and its remaining assets will be turned over to The Southern Co.

In its quest for Commonwealth & Southern stockholders, Tracers Co found 35% of them were dead and in these cases a search had to be made for their heirs.

Most of the missing stockholders or their next of kin are overjoyed on hearing of their windfalls, but there are exceptions.

A Few Complaints . . . One heir complained because the company hadn't found him sooner. He said the cash he received for his C&S holdings came to about $300 less than the value of the utility stock he would have received if found six months earlier.

Another stockholder beefed because the announcement of his good fortune came while his wife was at home. Had it come a few weeks sooner, he explained, she would have been out of town and wouldn't have known anything about his unexpected wealth.

A woman in Illinois was not at all happy upon learning that the C&S stock belonging to her deceased father was worth money. She refused to cash it in because she disputed the right of other relatives to share in the proceeds.

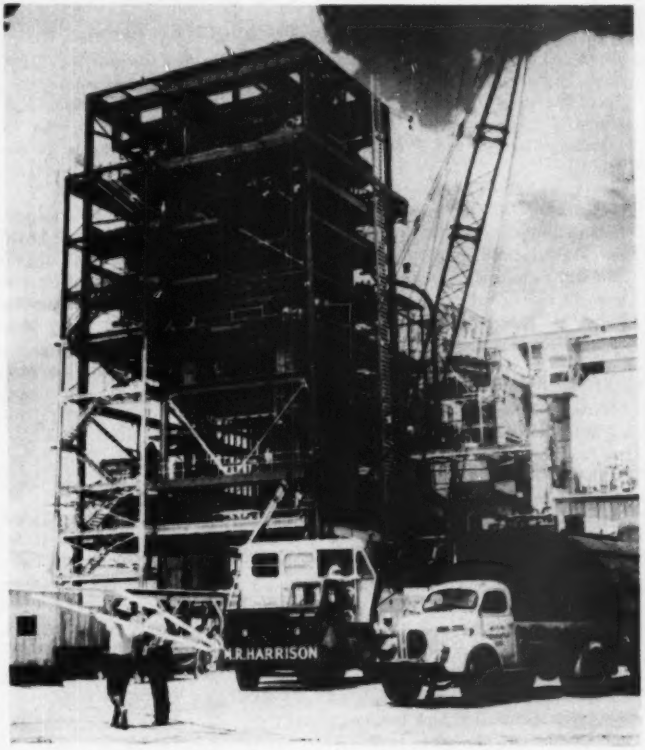
Army Engineers Planning Budget Half of Last Year's

Planning program of the Army Corps of Engineers for the present fiscal year will cost about half as much as the program for the past fiscal year.

The corps has allocated $2,015,000 among 36 waterway projects for planning during fiscal 1953. In the previous fiscal year it allocated $3,998,400 for planning of 32 projects.

Of the 36 projects on this year's planning list, 12 are multipurpose projects containing hydroelectric installations. Names of the power projects, their location, initial installed capacity and amount of planning money allocated this year are as follows:

Howell Mill Shoals Dam, Alabama, 200,000 kw, $100,000; Greers Ferry Reservoir, Arkansas, 64,000 kw, $40,000; Hartwell Reservoir, S. C.-Ga., 180,000 kw, $150,000; Jessamine Creek Reservoir, Ky, 13,900, kw, $40,000; Fort Peck Dam, (second power plant), Montana, 80,000, kw, $25,000; Chamita Reservoir, New Mexico, 15,000 kw, $85,000; Keystone Reservoir, Oklahoma, 60,000 kw, $90,000; Hills Creek Reservoir, Oregon, 20,000 kw, $75,000; Carthage Dam, Tennessee, 92,000 kw, $50,000; McGee Bend Dam, Texas, 28,800 kw, $50,000; Gathright-Falling Spring Reservoir, Virginia, 34,000 kw, $100,000; and Ice Harbor Lock and Dam, Washington, 195,000 kw, $140,000.



To Meet Miami's Next Seasonal Peak

This nearly completed 75,000-kw addition at Florida Power & Light Co's Cutler Plant a few miles south of Miami will bring the station's total capability to 155,000 kw. The plant then will be the most powerful in Florida, the company says, and the new generator the largest in the state.

The addition is expected to go on the line the latter part of this year, with testing scheduled for November.

MEETINGS

Interior Lighting Is Highlight...

. . . of Illuminating Engineering Society's National Technical Conference. Parley is scheduled for Sept. 8-12 at Chicago

Discussions on quality and quantity of interior illumination, color, television, and residence lighting and presentation of the IES Gold Medal will highlight the National Technical Conference planned by the Illuminating Engineering Society.

Nine Sessions Planned . . . The conference is scheduled for Sept. 8-12 at the Edgewater Beach Hotel, Chicago, and will feature nine technical sessions at which 30 technical papers will be presented.

Two general sessions will be devoted to interior illumination. Topics slated for discussion will be "Brightness Discrimination Data for the Specification of Quantity of Illumination," "Appraisal of Industrial Lighting Systems," and "Visibility of School Tasks."

A color television session will be presented by C. M. Hoyler of the Radio Corporation of America Laboratories, Princeton, N. J. This session also will include the special presentation, "Expressiveness of Color," by Ralph M. Evans, head of the color control department of Eastman Kodak Co.

Recreation Room Lighting . . . Presiding at the residence lighting forum will be Jan Reynolds, Sylvania Electric Products, Inc. Papers in this session will range from the home considering such lighting problems as recreation rooms, bathrooms, kitchens. At this session Marianne Willisch, a Chicago interior designer, will offer her views on lighting. Katharine Goodall, Philadelphia Electric Co, will discuss the lighting of a recreation room in an average income home.

Papers covering fluorescent lighting both as to operation at high frequency and evaluation of color rendition, mercury discharge lamps, and lamp and ballast design will be presented at the session on sources and circuits.

Slated for discussion at the daylighting session is the attainment of quality daylighting in school classrooms. The topic will be discussed by R. A. Boyd, University of Michigan. Controlling and redirecting daylight by means of louvers will be described by H. S. Bull, University of Michigan.

IES Medal Recipient . . . The society's Gold Medal will be presented at the opening session to H. H. Magdsick, General Electric Co, for his meritorious achievements in the field of illuminating engineering.

EJC Unit Plans Talks on Engineering Shortage

Attention will be directed at the current engineering manpower shortage problem when the Engineering Manpower Commission of the Engineers Joint Council holds its conference Sept. 7 at Conrad Hilton Hotel, Chicago.

The conference will be conducted by General Chairman, O. W. Eshbach, president, Western Society of Engineers, member EMC, and dean of Northwestern Technological Institute, Northwestern University. A. C. Monteith, vice president of Westinghouse Electric Corp, will present a summary of the program after the conference's open forum.

ASTM to Hold Parley

"Men, Materials, and the Power Industry—A Trio in Action" is the subject Norman L. Mochel, manager, metallurgical engineering, Westinghouse Electric Corp, will discuss when the American Society of Testing Materials holds its sessions Sept. 10-11 at Hotel Sherman in Chicago during the Centennial of Engineering.

CALENDAR

Centennial of Engineering
Convocation, Chicago, Ill., Sept. 3-13.

International Electrotechnical Commission
Palace Hotel, Scheveningen, Netherland, Sept. 3-13.

Michigan Municipal Utilities Association
Annual Convention, Charlevoix Beach Hotel, Charlevoix, Mich., Sept. 4-5.

Maryland Utilities Association
Cavalier Hotel, Virginia Beach, Va., Sept. 5-6.

***Engineers Joint Council**
Engineering Manpower Conference, Engineering Manpower Commission, Conrad Hilton Hotel, Chicago, Sept. 7.

Rocky Mountain Electrical League
Fall Convention, Colorado Hotel, Glenwood Springs, Colo., Sept. 7-10.

American Society of Mechanical Engineers
Fall Meeting, Sheraton Hotel, Chicago, Ill., Sept. 7-11.

American Standards Association
National Standardization Conference in conjunction with Centennial of Engineering, Museum of Science-Industry, Chicago, Ill., Sept. 8-10; 34th Annual Meeting, Waldorf-Astoria Hotel, New York, Nov. 19.

Edison Electric Institute
Area Development Institute, Yale University, New Haven, Conn., Sept. 8-10; Accident Prevention Committee, Sheraton Hotel, Rochester, N. Y., Sept. 15-16; Prime Movers Committee, Roosevelt Hotel, New Orleans, La., Oct. 6-7; AEIC joint meeting, Meter-Service Committees, Mayflower Hotel, Washington, D. C., Oct. 6-8; Electrical Equipment Committee, Roosevelt Hotel, New York, Oct. 13-14; Transmission - Distribution Committee, Hotel Adolphus, Dallas, Tex., Oct. 23-24.

Illuminating Engineering Society
National Technical Conference, Edgewater Beach Hotel, Chicago, Ill., Sept. 8-12.

Instrument Society of America
7th National Instrument Conference-Exhibit, Cleveland Auditorium, Cleveland, Ohio, Sept. 8-12.

National Association of Corrosion Engineers
Short Course on Corrosion in cooperation with Washington University, St. Louis, Mo., Sept. 8-12.

***Illinois Institute of Technology**
Centennial Conference on Industrial Research, Armour Research Foundation, Institute's Campus, Chicago, Sept. 9.

American Society for Testing Materials
Power Industry—Wood Symposiums in conjunction with Centennial of Engineering, Hotel Sherman, Chicago, Ill., Sept. 10-11.

Pennsylvania Electric Association
Annual Meeting, William Penn Hotel, Pittsburgh, Pa., Sept. 16-17; Fall Meeting, Electrical Equipment Committee, Irem Temple Country Club, Dallas, Pa., Oct. 2-3; Transmission - Distribution Committee, Penn-Alto Hotel, Altoona, Pa., Oct. 9-10; Fall Meeting, Systems Operation Committee, Hotel Roosevelt, Pittsburgh, Oct. 16-17; Industrial Committee, Bedford Springs Hotel, Bedford, Pa., Oct. 23; Fall Meeting, Meter Committee, Fort Stanwix Hotel, Johnstown, Pa., Oct. 23-24; Fall Meeting, Relay Committee, Robert Treat Hotel, Newark, N. J., Nov. 13-14.

Northwest Public Power Association
Accounting Section, Congress Hotel, Portland, Ore., Sept. 18-19.

Public Information Program
Annual Workshop Conference, Edgewater Beach Hotel, Chicago, Ill., Sept. 18-19.

Public Utilities Association of the Virginias
Greenbrier Hotel, White Sulphur Springs, W. Va., Sept. 19-20.

***New England Meter Engineers**
Fall Meeting, Coonemessett Inn, Hatchville, Mass., Sept. 25-26.

Southeastern Electric Exchange
Fall Meeting, Engineering - Operation Section, Atlanta Biltmore Hotel, Atlanta, Ga., Sept. 25-26; Accounting Conference, Jung Hotel, New Orleans, La., Oct. 16-17; Sales Conference, Thomas Jefferson Hotel, Birmingham, Ala., Oct. 29-31.

* **Addition this week.**

GREATER FLEXIBILITY AT LOWER COST

A large gas handling plant saved thousands of dollars by installing five G & W Type "RAL-SC" switch-fuse assemblies as primary switchgear.

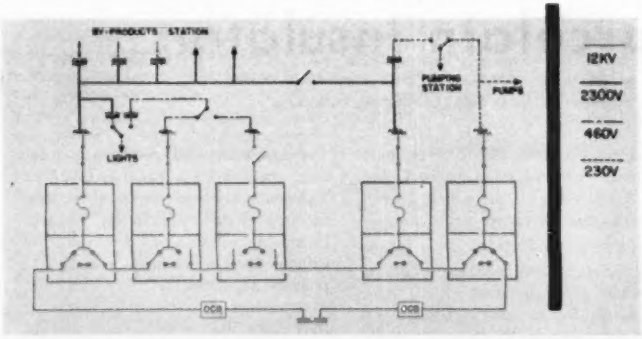
Where power failure at any point might disrupt essential service to thousands of gas consumers, Type "RAL" load break oil switches were used to connect two utility feeders in a 12-kv. loop supplying five 1500-kva. transformers and one 450-kva. transformer.

The load of the station is divided into two groups with the coal handling station and by-product station comprising one and the service water pumping station the other. Equipment in these areas operates at 2300, 460, and 230 volts. The system was designed to provide alternate power at each operating voltage.

Each of the 12-kv. transformers can be connected through its associated "RAL" switch to either of the two utility feeders. If one feeder is down, the entire load can be connected to the remaining feeder—or the load can be divided between the two feeders to keep the system balanced. Fuse protection for each transformer is furnished by Type "SM" power fuses.

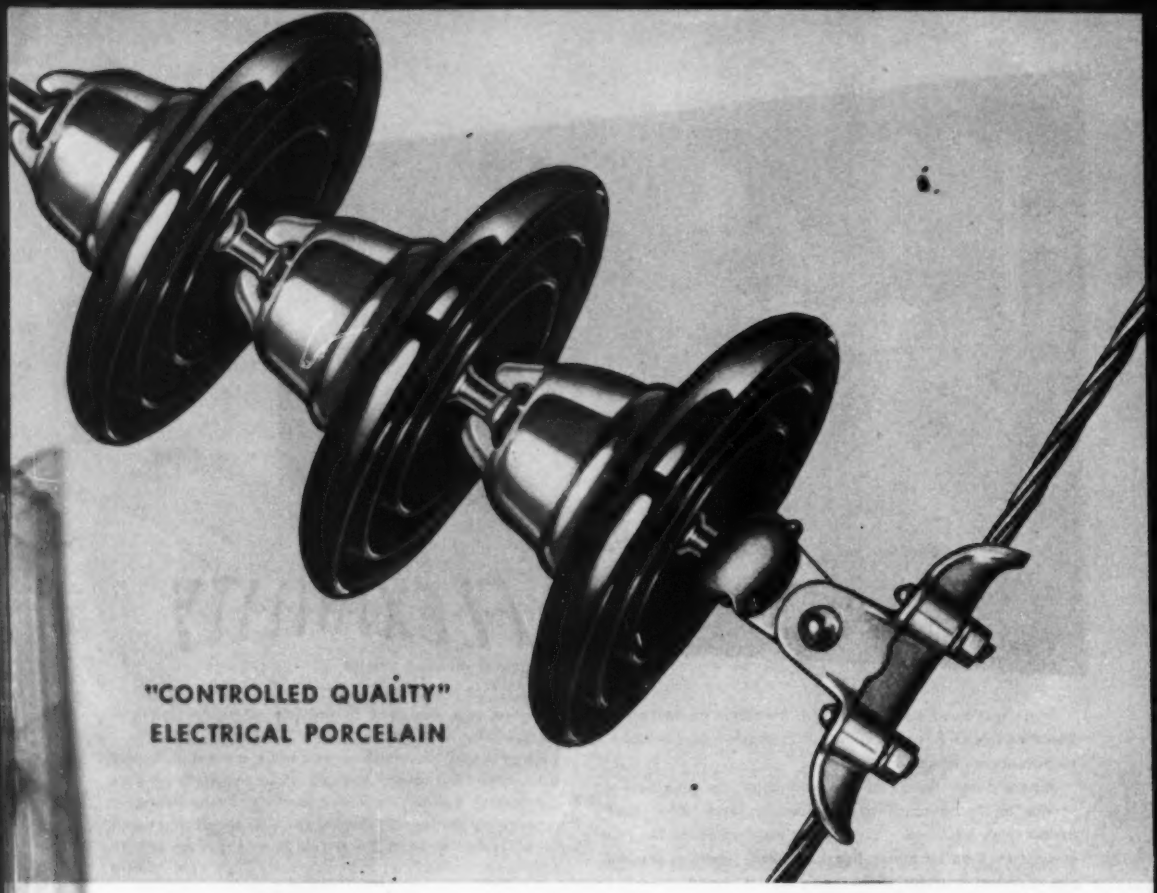
The "RAL-SC" units are fully enclosed in sealed, welded steel compartments installed outdoors. Operating shafts of the "RAL" switches extend through the walls of the building and are operated from the inside. Cabinets are interlocked with the switches so the power fuse enclosures cannot be opened when either feeder is connected to the load circuit.

Any one of the 12-kv. transformers can be isolated by operation of the "RAL" switch to connect the loop feeders to the internal tie bus instead of to the load tap. Load normally fed through that transformer can then be picked up by one or more of the other transformers.



SEND AN OUTLINE OF YOUR SWITCH-FUSE PROBLEMS FOR G & W RECOMMENDATIONS.

G & W ELECTRIC SPECIALTY COMPANY
7780 DANTE AVENUE • CHICAGO 19, ILLINOIS, U.S.A.
Representatives in principal cities. In Canada, Powerlite Devices, Ltd., Toronto



How L-M Controls the Quality of J-D Porcelain Insulators

by **W. V. Swan, Manager, Porcelain Sales, Line Material Company**

In the early days of electrical porcelain, the making of insulators was to a great extent an art, and a craft. The skilled craftsmanship is still important, but today insulator design is a matter of precision engineering, and production is a series of carefully controlled processes, checked by extensive testing and inspection during and after production.

During many years, L-M's J-D plant has made many contributions to the progress in design and production methods, and today J-D products are widely known and recognized for their high quality.

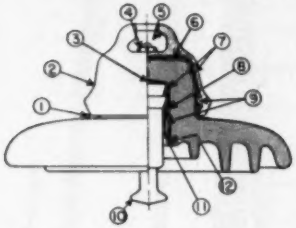
Both EEI and NEMA have set standards for acceptable porcelain products, and J-D products amply meet these standards. But to make sure that every individual unit meets these standards with a generous margin of safety, we have set up many new designs, new methods of making insulators, and new test methods. We must know that ten, twenty years from now, these insulators will still be giving dependable performance and protection.

The clays used in J-D products are carefully checked. Each batch is tested to make sure it meets our rigid requirements. Only demineralized water is used, from J-D's own wells and demineralizing system. Most of the men who make J-D products are skilled craftsmen with years of experience. But to help them develop their skills, their work is tested and retested, to assure precisely controlled, uniform production.

Because of this complete cooperation between craft and science, J-D products are outstanding in quality—in performance, in ruggedness and strength, and in their long life.

Molded or cast materials are made under close control, by highly skilled craftsmen. After the slip is poured into molds, shown here, the casting is given time to dry to the proper consistency for finishing. The time must be long enough to assure strength and firm body, short enough to permit final finishing and proper glazing.

Every strain insulator gets this "M&E" test—in which the insulator is under mechanical strain at the same time it is given a high voltage electrical flashover test. Plenty of noise and ozone here, but the results assure uniformly high quality. This is only one of the many inspections and tests given J-D products.



Some J-D Engineering Features

Cutaway view of a J-D Cap and Pin type suspension insulator shows some of the J-D engineering features that assure quality.

1. Proper clearance between edge of cap and top of porcelain shield.

2. Caps are made of high grade malleable iron, properly treated to avoid embrittlement when galvanized. Forged steel can be furnished.

3. Treated fibrous washer to provide a cushion between the end of the pin and the porcelain.

4. Spring brass cotter key.

5. Smooth socket, accurately manufactured to standard dimensions.

6. Resilient compound—applied to head of porcelain by hot dip process—serves as a cushion between bottom of cap and top of porcelain.

7. Resilient compound applied to inside surface of the cap and outside surface of the pin.

8. Sanded surfaces are coated with a layer of resilient compound.

9. Cemented joint between the hardware and the porcelain.

10. Forged steel pin—gauged accurately to standard dimensions.

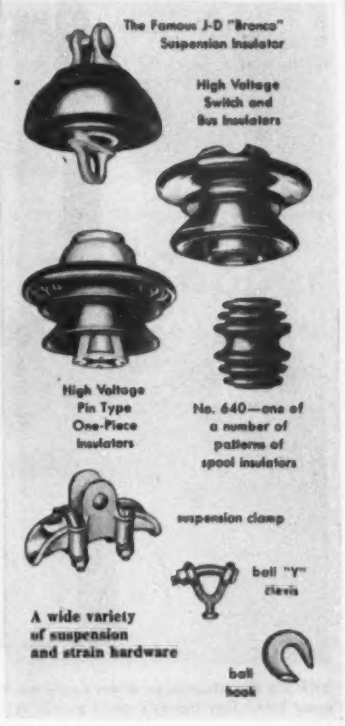
11. Sealing compound.

12. Copper oxide glaze radio treatment will be furnished if specified. J-D Suspension Insulators are recognized as having a satisfactory radio noise level without treatment.

Get Full Information

L-M offers a complete line of electrical porcelain insulators and hardware, plus engineering help in the selection of the right design to meet practically any transmission or distribution insulator problem.

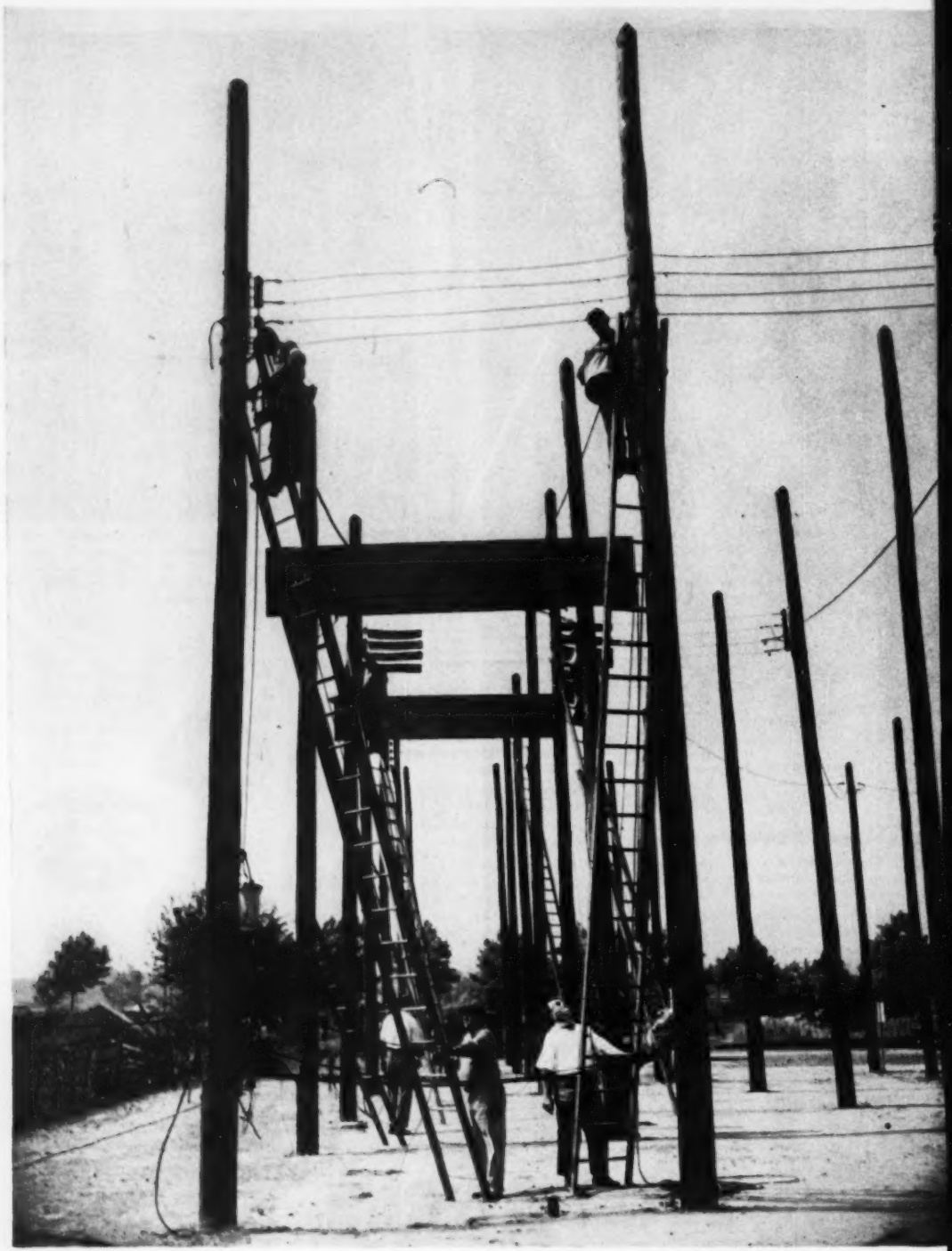
For complete information ask the L-M Field Engineer who calls on you, or write Mr. Swan, Jeffery-DeWitt plant, Line Material Company, Kenova, West Virginia (a McGraw Electric Company Division). 94


The Famous J-D "Bronco" Suspension Insulator
High Voltage Switch and Bus Insulators
High Voltage Pin Type One-Piece Insulators
No. 640—one of a number of patterns of spool insulators
suspension clamp
ball "Y" clevis
A wide variety of suspension and strain hardware
ball hook

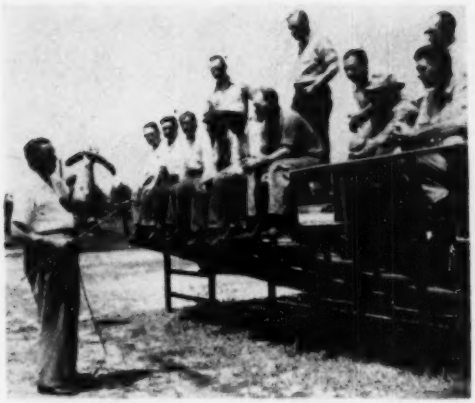
LM® J-D

LINE MATERIAL

Electrical Porcelain Insulators

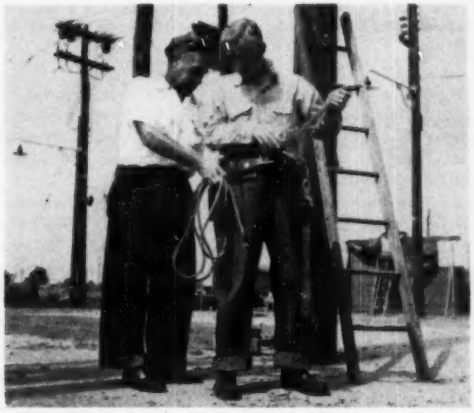


THERE'S ROOM for plenty of gas service men at the top at Consolidated Edison Co's linemen's school grounds in Flushing, L. I. Here, 346 gas service bureau employees were retrained to install overhead service in emergencies, freeing linemen for more urgent repairs



SCHOOL DIRECTOR Willard O. Unkenholz lectures his class of 12 gas service bureau employees in the use of cable on electrical systems

THESE GAS MEN found electrical work requires complex gear. They are shown looking over a display board after a briefing on its contents



ONLY ONE right way to put on a safety belt, Instructor Henry Ganz tells a student. Class works first on short ladders, then 35-footers

LADDER MUST be tied securely to the pole, Lineman Dewey McCormack, right, explains to a trainee during ground session

Gas Men Who Can Double in Copper

Given a special course, they fill Con Ed's need for a standby crew that can install overhead services in emergencies

Because the winds blew and the lines came down on Nov. 25, 1950, about 350 gas service men of Consolidated Edison Co of New York today are learning how to install overhead electric services.

The day of the big wind, Willard O. Unkenholz, in charge of Con Ed's electrical schools, was given just one hour to train an emergency low-line crew to relieve the regular gangs for more urgent high-wire work.

"We took people from a number of departments to repair home services," Unkenholz said recently. "I was very surprised we didn't set any houses afire that day—the men did a very creditable job."

But when things got back to normal, the company decided it needed a standby force to augment the regular overhead crews in emergencies, atomic or natural.

That is where the gas men came in. With conversion to natural gas on much of the system, calls for gas service men have become less and less. The service bureau group, most of them gas employees, seemed to be the logical choice for the special training in line work.

A school for gas employees was set up under Unkenholz on the grounds of the company's regular linemen's school in Flushing, L. I. This summer, the maintenance men, many between 40 and 50 years old, have been learning a new trade after years and years on the other side of the combination company. The plan has a bonus: It promises to provide work for long-term employees whose jobs may go out of existence when gas

BREAK for orangeade makes a day's session in the sun easier to take. The men chip in for the makings—company supplies the cooler

INSTRUCTOR Leon Novick, center, tells the men how a service tie should be made, using dead secondary conductor for demonstration

manufacturing facilities are supplanted by natural gas pipelines.

Gas service men, in groups of 12, start out their three-day course on the ground and work up to the top of 35-ft ladders.

"Not everybody can take heights," Unkenholz told one group recently. "If you find it's impossible to climb a ladder, your status in the company won't change one iota."

The school's director works with three assistants, all practical men who have had much experience working with hot lines. The instructors show the gas men how to distinguish secondaries from primaries ("Don't work on any wires that are on cross-arms," an instructor cautions); how to use rubber gloves and put rubber blankets in place. It's not done in a spirit of make believe, either—the lines the men work on at the school are energized up to full secondary voltage.

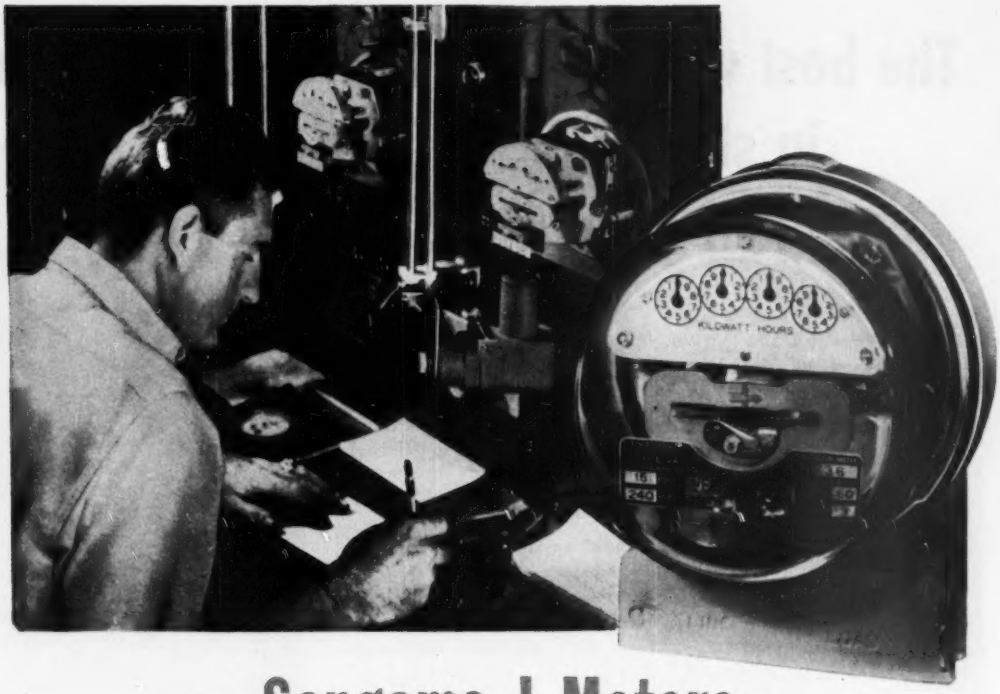
The gas man's formal course is completed when he has learned to make the service connection on the side of a "house" and tie into the secondary lines atop a pole. After that, he's sent out with trouble men so he can get field experience in installing services. The company plans to bring its duplex service men back for a refresher course every year or two.

"Getting together a group like this," Unkenholz commented, "gives us a chance to do something for the customer—he likes to see men out there putting his line up again when it's been blown down.

"And while our special crews are doing that for him, the regular linemen are free to work on bigger lines that are out."

"HOUSE" side of the connection is made by two converted gas men. School stresses ladder-top safety, makes sure men use their belts

TYING into the secondary is final phase of three-day course. From here the reconverted service man is ready to go out trouble shooting



Sangamo J Meters

save costly man-hours

Sangamo J Meters are preferred by men who *work* with meters. Simple full-load and light-load adjustments that are readily accessible from the front . . . registers that are easy to read and easy to remove . . . are a few of the reasons why J Meters are favorites with meter testers everywhere! They're faster to test . . . easier to calibrate.

Sangamo J Meters are also preferred by cost-conscious utility managements because these meters save man-hours. That accurate factory calibration is sustained for many years is proved by the following actual service records: After an 8-year periodic test, one customer reports that all of a large group of J Meters maintained an accuracy between 98% and 102% at both light and full load. Another customer, also after an 8-year period, found 99.6% of all J Meters within the same accuracy band at full load, and 99.3% within this accuracy range at light load.

With J Meters, it is *field evaluation* which proves the saving of costly man-hours.

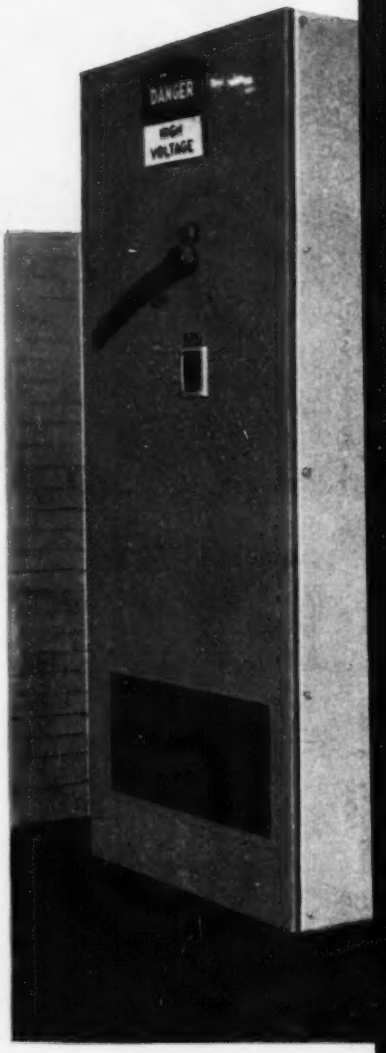
Only Measured Facts are Known Facts

SANGAMO
ELECTRIC COMPANY
SPRINGFIELD, ILLINOIS

SM52-9

Sangamo J Meters have proved their ability to meet today's requirements and tomorrow's anticipated loads with sustained accuracy, economy of maintenance and troublefree performance.

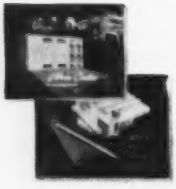
The best way to keep Power Distribution in step with Plant Expansion!



Rock Hill Printing and Finishing Company had a power problem that plagues many industries today. Their rapidly expanding plant was simply growing away from its power source. The resulting overextension and overloading of feeders created conditions that always hamper production: excessive line losses . . . poor voltage conditions . . . frequent service interruptions. But note how effectively a Westinghouse Power Center—serving as an additional distribution point—solved the problem . . .

> "After the installation, we found voltage conditions improved as much as 10 percent . . . line losses reduced 5 percent . . . and unnecessary tripping out completely eliminated.
>
> "Remarkably little time and engineering effort were required in making the installation. We found it almost as simple as plugging in an appliance. And we saved nearly 2000 feet of cable as a result of shorter, low-voltage runs."

This Westinghouse Dry-Type Power Center will enable this user to realize even further savings. The elimination of vaults, oil conditioning and testing, promises a saving in maintenance, virtually eliminates fire hazard, and provides greater safety for operating personnel. Westinghouse Power Centers offer these same advantages to you. J-60777



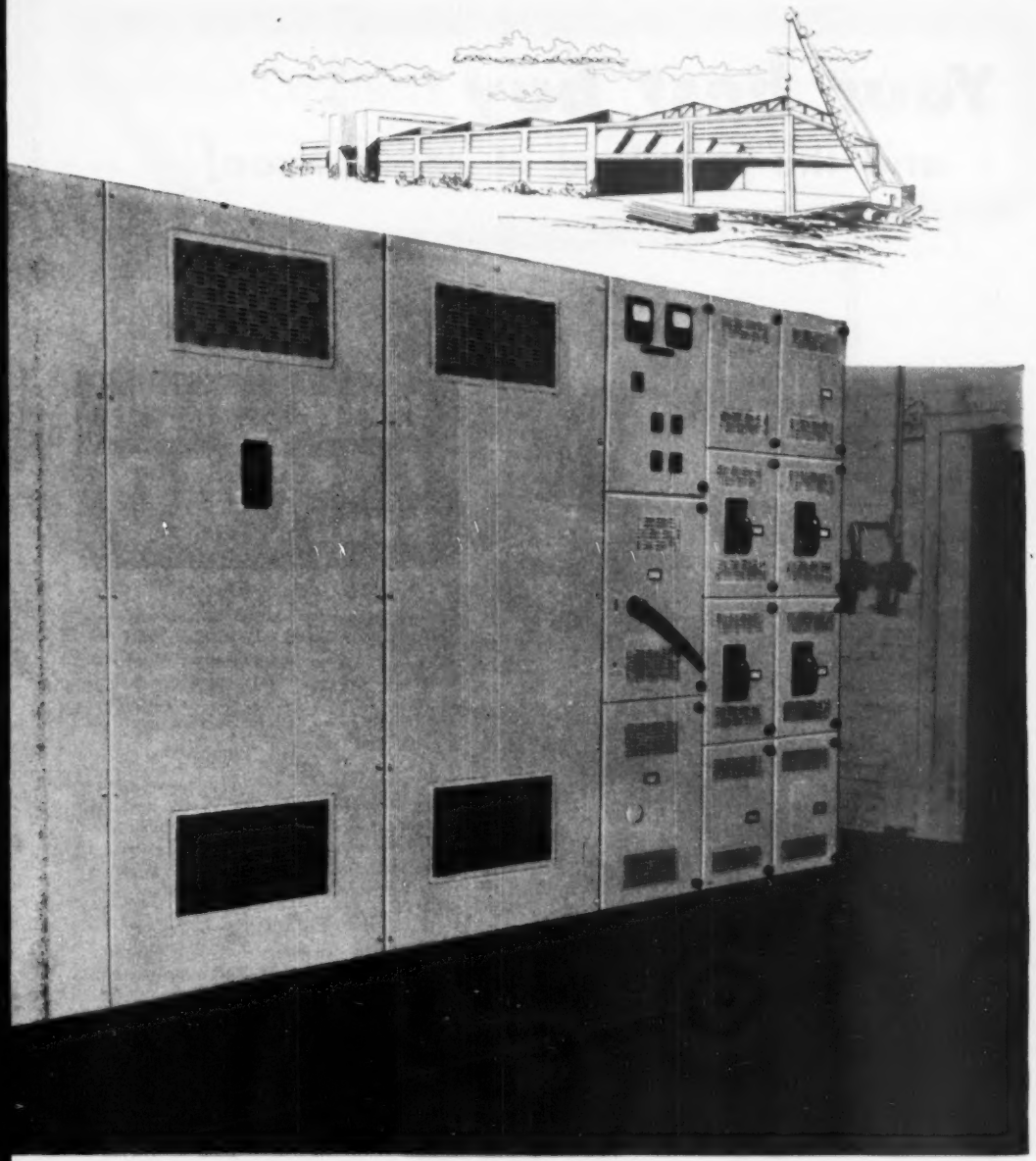
GET THE COMPLETE STORY

Westinghouse Power Centers are the key to efficient power distribution. They offer better service continuity, greater flexibility, better regulation—all the things that contribute to power distribution economy. Most important, they provide the simplest, lowest cost way of attaining the power system that best meets your operating requirements.

Booklet B-4162 covers Westinghouse Power Centers in detail. Booklet B-4045 discusses various types of plant distribution systems wherein Power Centers offer maximum advantage. For your copies contact your Westinghouse Representative or write: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

YOU CAN BE SURE...IF IT'S Westinghouse

POWER CENTERS

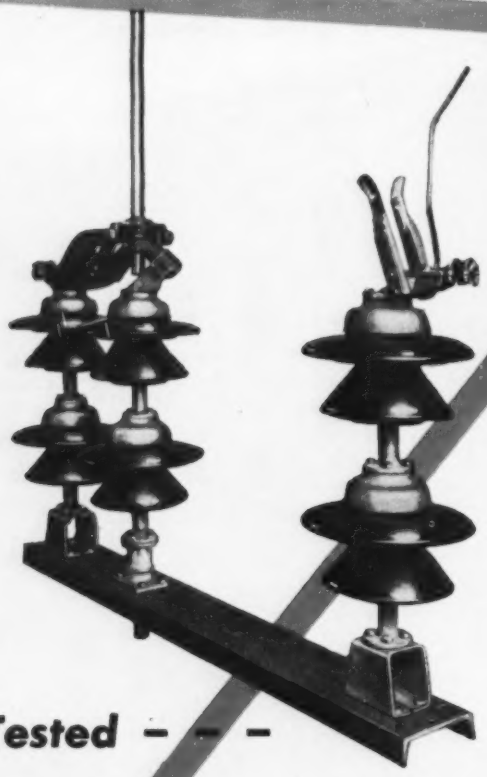


AT ROCK HILL PRINTING AND FINISHING COMPANY

Rock Hill, S.C... this Westinghouse Dry-Type Power Center is part of a distribution system as modern as the plant additions it serves. Located near the center of load it makes possible shorter secondaries, lower line losses, better regulation.

Your best buy

and the standard of comparison!



Tested – – –

Proved – – –

Accepted – – –

DELTA-STAR'S "MK-40"

Delta-Star has for years as a standard routine practice tested all switches, both for normal current carrying capacity and for short time rating, before placing new designs in production. Delta-Star has *never* designed and placed a switch in production purely on a calculated basis.

With exceptionally large and extensive laboratory facilities for testing at the factory, Delta-Star has nevertheless had instances where the capacity of the switches exceeded these facilities. In such cases the switches were tested elsewhere . . . but they were *always tested!*

That is why we *know* that *all* Delta-Star Switches rated 400 to 5000 amperes will meet the NEMA guaranties as to normal rating and short time rating. Proving the adequacy of design by actual tests has been routine practice with Delta-Star for many years . . . and this is simply another reason why the MK-40 has won universal acceptance by operating engineers and is *your best buy.*

WHEN YOU WANT THE BEST IN HIGH VOLTAGE SWITCHES SPECIFY THE "MK-40"

DELTA-STAR ELECTRIC COMPANY

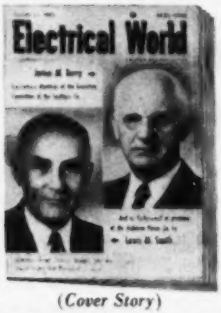
DIVISION OF H. K. PORTER COMPANY, INC.

2437 Fulton Street • Chicago 12, Illinois

DISTRICT OFFICES IN PRINCIPAL CITIES

Southern Co Elects Barry . . .

. . . a director, chairman of newly established executive committee. His post as head of Alabama Power filled by Smith



(*Cover Story*)

James M. Barry has been elected a director and chairman of the newly created executive committee of The Southern Co. Barry will remain a director, but has resigned as president of Alabama Power Co, a subsidiary of Southern Co.

Named President . . . Lewis M. Smith, vice president and general manager of Alabama Power, has been elected president of the utility to succeed Barry.

In other appointments, Edgar W. Robinson, operating vice president of the Alabama utility, has been made general manager. Walter Bouldin, a member of the law firm of Martin, Turner, Blakey, & Bouldin of Birmingham, Ala., has been named to the new position of financial vice president.

Barry has been associated with Alabama Power for the past 34 years. He joined the utility in 1918 as local manager of its Anniston operations. He was named vice president in 1926, general manager and a director in 1932, and president in 1949.

Started as Draftsman . . . Smith began his career with the Alabama utility in 1923 as a draftsman. He became chief electrical engineer in 1939 and served in that capacity until 1944 when he became director of the public relations department. In 1945 he was elected vice president and four years later was named general manager and a director.

Robinson was employed by Alabama Power in 1923 as assistant superintendent of distribution. Later he became superintendent of distribution and in 1936 he was appointed operating manager. He was elected operating vice president in 1937, becoming a director in 1940.

While with the Birmingham law firm Bouldin had been connected with the financial field, working with the security issues of Alabama Power and regulatory bodies having supervision over the company's affairs.

Bouldin, a native of Alabama, is a graduate of the University of Alabama and Harvard Law School.

EDGAR W. ROBINSON

WALTER BOULDIN

W. Wilder Heads Depa's Power Supply Division

Defense Electric Power Administration has announced that Wilford D. Wilder, Niagara Mohawk Power Corp, succeeds Hollis K. Sels, Public Service Electric & Gas Co, Newark, N. J., as director of its Power Supply Division. Jack Arvin Wright, general engineer for Carolina Power & Light Co, also has been assigned to the same division.

The agency also announced the following assignments:

Ray G. Chester, superintendent of diesel generation, Southern California Edison Co; and Vincent H. Irwin, power engineer, United Engineers & Construction, Inc, have been assigned to the Major Equipment Scheduling Branch.

Charles W. Stoner, boiler engineer for Duquesne Light Co, has been assigned to the Construction Expediting Branch.

Wilder joined Depa last June as a regional engineer. He holds the post of superintendent of power control for Niagara Mohawk's Western Division. Sels joined the federal agency Dec. 6, 1951, and has directed the Power Supply Division since Jan. 9. He is returning to his duties with Public Service E&G, where he fills the position of transmission and distribution engineer and is vice chairman of the utility's system development committee. Sels, however, will continue to serve as consultant to Depa's administrator.

•

Donald R. Guthrie has been made executive engineer in charge of engineering research for Minnesota Mining & Manufacturing Co. Guthrie, a division engineer since 1944, joined the company in 1939.

James L. G. Beatty has been appointed acting project manager of the Ontario Hydro-Electric Power Commission's program of standardization at 60-cycle frequency in the Wallaceburg-Dresden section.

John W. Queen has been appointed manager of the Cleveland plant of Joseph T. Ryerson & Son, Inc, Chicago. Queen, manager of the Alloy Steel Division since 1947, has been in Cleveland for the last two months

Facts from MONTANA

"'CSP' Transformers cut failures 50 to 1"

"We have been using 'CSP' Transformers for the past ten years," says a Montana Utility. "One of our divisions now has about 1,000 'CSP' Transformers in service, and an equal number of the conventional type.

"Of all our 'CSP' Transformers, we have lost but one from lightning. During this 10-year period, we have been losing an average of five conventional transformers per year. That means a ratio of approximately 50 to 1 in favor of the 'CSP'."

Old standards for judging transformers were discarded when the "CSP" (Completely Self-Protecting) Transformer was introduced. The "CSP" Transformer, with both lightning and thermal protection built in, has slashed costs, cut maintenance, and improved service continuity. Its reputation has been won by performance in the field, in instances like this one—records that have made it first choice with utilities coast to coast.

Installation and maintenance costs for Westinghouse "CSP" Transformers are always lower, because complete protective equipment is built in, not separately mounted. A two-year survey of Electric Light and Power Companies developed the National Averages shown at left.

NATIONAL AVERAGES

	"CSP"	Conventional
Installation Costs	$13.87	$24.74
Burn-out Rate	0.257%	1.005%
Fuse Outages	None	5.64% @ $6.52 per outage
Load Checks	Automatic	12.8%
Breaker Reset	1.02%	None

If you'd like to check your own costs against these national averages, ask your Westinghouse representative for Booklet B-4247-B, "Transformer Costs and Their Relation to Profits". Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania.

"CSP" devices . . . originated and patented by Westinghouse

Westinghouse

"CSP" DISTRIBUTION TRANSFORMERS

J-70591-A

assisting **William O. Springer,** plant manager since 1945. Springer will move East for special administrative duties while awaiting reassignment.

Allis-Chalmers' Research Division Adds 4 Scientists

Allis-Chalmers Manufacturing Co, Milwaukee, Wis., has announced several appointments and retirements.

Four new research scientists have been assigned to the firm's Research Division. They are: Fabian Bernstein, John W. Dzimianski, C. W. Little, Jr, and Ralph A. Person. Dzimianski and Little are electrical engineers, having received their bachelor and doctor degrees from Johns Hopkins University. Bernstein received his doctorate in 1952 from Polytechnic Institute of Brooklyn and Person received his doctorate this year, too, from Massachusetts Institute of Technology.

R. W. Davis, since 1949 special representative at the firm's Norwood (Ohio) Works, has retired. Dr Soren H. Mortensen, chief electrical engineer for the power department, and his assistant, Fraser Jeffrey, also have retired.

Davis, an electrical engineer who graduated from Massachusetts Institute of Technology, started with A-C in 1915. From 1944 until 1949, he was general manager of the Norwood Works. Mortensen was awarded in 1945 the Lamme Medal of the American Institute of Electrical Engineers. Jeffrey, also an electrical engineer, has been at the Milwaukee plant since 1908.

•

Richard B. Taylor has been made manager of sales for the Aluminum Division of Essex Wire Corp, Fort Wayne, Ind. For the past year Taylor has served as chief of the rod, wire, bar, and cable section of the Aluminum Magnesium Division of National Production Authority.

Dr C. J. Breitwieser has been promoted director of engineering of P. R. Mallory & Co, Inc, Indianapolis, Ind. Previously he served as executive assistant to Dr F. R. Hansel, vice president in charge of engineering. Breitwieser joined Mallory in 1951.

Raymond G. Carroll has retired as manager of the Williamsburg office for Virginia Electric & Power Co. Carroll, who had served the utility 50 years, was assigned to the manager's post in 1943.

Ralph A. Rockwell has been named technical consultant for the Valve Division of Minneapolis-Honeywell Regulator Co. Rockwell, formerly director of engineering of Mason-Neilan Co, Boston, will serve as adviser to the division's sales and engineering departments.

Boston Edison Names McMenimen Treasurer

Albert C. McMenimen, vice president and comptroller of Boston Edison Co, also has been named treasurer. He succeeds Edward J. Hyland, who has resigned because of health reasons. Hyland, however, has been appointed a vice president of the utility attached to the executive staff.

A certified public accountant, McMenimen was connected for 16 years with the Internal Revenue Department. In 1937 he started with Boston Edison and was put in charge of tax, real estate, and general accounting activities. He was elected vice president in 1942, a director in 1947, and vice president and comptroller in 1950.

Formerly an assistant professor of accounting at Boston University, Hyland joined Boston Edison in 1938 as comptroller and assistant treasurer, becoming treasurer a year later.

•

P. Bernard Fleming has been appointed public relations manager of Westinghouse Electric Corp's Appliance Division at Mansfield, Ohio. The firm also named **William H. Nelson** manager of industrial relations for its Appliance Division at East Springfield, Mass.

Edward R. Taylor, formerly vice president of markets for Hotpoint, Inc, has been elected a vice president of Motorola, Inc. He will serve as assistant to the president and will supervise sales and merchandising programs.

Robert R. Anderson, formerly with the advertising staff of Fairbanks, Morse & Co, has been appointed advertising manager of Dearborn Chemical Co, Chicago. His appointment fills a vacancy created by the resignation of **Earl J. Goris,** who left Dearborn to accept a position in Honolulu, T. H.

OBITUARY

Whipple Jacobs

Whipple Jacobs, 55, president of Phelps Dodge Copper Products Corp since Jan. 1, 1949, died Aug. 18 at Pipersville, Pa.

Jacobs started his career in 1914 with Belden Manufacturing Co, makers of electrical wires, cables, and cordage. Except for service with the Army during World War I, he remained with Belden for 34 years until he was elected president of the Phelps firm.

While with the Belden company Jacobs was made purchasing agent in 1923, general sales manager in 1927, and vice president in charge of sales in 1930. He filled this post until 1939 and then served as president from 1939 to 1949.

Jacobs was elected this year a member of the board of governors of National Electrical Manufacturers Association, having previously served in this capacity from 1945 to 1948. He had been elected a vice president of NEMA in 1948.

Franklin S. Piper, 80, retired electrical engineer of Public Service Co of New Hampshire, died at Manchester, N. H., Aug. 17. Piper, who was identified with the electrical development of the utility's state-wide system, retired in 1950. At the time of his death he was associated with Doble Engineering Co, Belmont, Mass., having been elected a vice president and director of the firm in 1923.

Charles Elliott, 67, retired manager of the Nampa (Idaho) office of Idaho Power Co, died Aug. 1 at Boise.

LOWDOWN on a new line to be built by Monongahela Power is given a group of farmers by George Sell, center, one of the utility's district field men. These men read meters, sell appliances, and represent the company in all of its community improvement efforts

Planting Money to Harvest Wealth

On the theory that customers must be made prosperous before a power company can make money, Monongahela Power Co invests heavily in an area-wide territorial development program

ARTHUR CLINTON SPURR

"We'll do anything that has a Chinaman's chance of improving the community."

A. C. Spurr, president of Monongahela Power Co, says his utility holds to this philosophy because "helping the customer to be prosperous makes us prosperous. The customer has to make money before we can."

Spurr and his associates believe Monongahela can help each community in its four-state territory to greater prosperity. They also believe Monongahela can develop community interest in local problems, such as housing and organized recreation, to make each Monongahela-served town a better place in which to live.

Applying its theory of what Spurr calls "enlightened selfishness," Monongahela Power has evolved a broad territorial development program. In a decade and a half it has helped increase per capita income in Monongahela's 39-county area by more than 200%—and, consequently, put the company on its firmest financial footing.

Spurr got his chance to apply the theory shortly after coming to Monongahela in 1935. West Virginia was laid low by the depression and a New Deal commission was studying a 10-county sector of Monongahela's service area with the idea of reshaping it into "a junior TVA." The commission made some startling revelations:

- 92 areas were "stranded" without funds, work, or even hope, with 41% of the families on relief.
- 19% of the work force was in industry (other than coal), 40% less than the national average.
- Annual income per farm was $351, against the national average of $754.
- 36% of the farm land and 55% of the farms were tax delinquent.

The committee stated that drastic action was necessary but recommended that local groups be given a chance before the government stepped in.

"We were pushed into our program by that report," says Spurr. "We had to make ourselves so important in solving the people's problems that they would never think of looking to Washington for help."

He led other businessmen, newspapermen, and other civic leaders to form the Upper Monongahela Valley Association. It was designed to lift the economic level of the 10 counties under the Interior Department's microscope.

Spurr soon recognized that the problems that made UMVA necessary were shared by the other 29 counties in Monongahela's service area. So he moved to augment UMVA by setting up Monongahela's own 4-man Territorial Development Department to push the rehabilitation program in all 39 counties.

Now grown to a staff of 19, the department is divorced

entirely from Monongahela's productive effort. Its sole function is to treat economic and social problems. Correlating its activities from his Fairmont, W. Va., office is the energetic, 63-year-old Spurr, who was once introduced as "president of the largest chamber of commerce in the country"—meaning Monongahela Power Co.

Spurr says he doesn't believe the program is original in a single respect. Yet, when he starts talking of its possibilities—in the words of one of his employees—"He bounces around like a golf ball in a boxcar."

As now organized, the program is built around the basic areas of agriculture, industry, commercial service, recreation, and housing. There is a trained counselor to deal with each. Because agriculture presents the widest range of problems, there are additional counselors on conservation, forestry, farm management, and rural homes.

The conservationist and forester help build up the watershed, improve water supply, cut down erosion, and develop forest reserves. Farm management counselor advises on farm planning, building construction, and equipment. Rural homes advisor stresses better farm living among farm women and youth groups.

The department also has field men working directly with the community, the industrialist, the businessman, and the farmer. There are seven operating divisions with a territorial development and agricultural representative for each division.

Industrial Growth . . . Perhaps the most noteworthy results in the program have been achieved by the industrial department, headed by George Buzzerd. It has a four-fold purpose:

1. To attract new industry to the area

2. To assist established industries to expand production and markets

3. To help communities create recreational, housing, and other facilities that will encourage industry to come into the territory

4. To fit industries into areas to which they are most adaptable by availability of resources and labor.

Since its inception in 1939, the department has helped attract over 650 new plants into the region. Capital outlay in new construction and expansion has exceeded $100-million. Number of wage earners has increased from 38,973 to 81,200. Wages distributed have jumped from $78 million to $244 million. Number of industrial workers now equals those working the mines; whereas in 1935 there were 2¼ miners for each industrial worker.

FARMING FOR BETTER LIVING progress is emphasized by W. C. Handlan, territorial development manager, at meeting of members

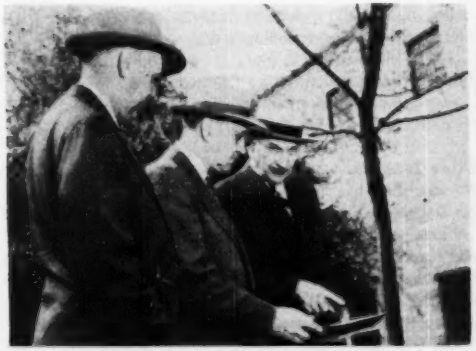
Typical way in which the department operates is indicated in the story of the Sterling Faucet Co. That firm had been operating in Ohio when a fire levelled its factory and ruined most of its equipment.

Monongahela heard of Sterling's plight and got busy. E. B. Smith, then manager of the territorial development department, told the Sterling people about an abandoned tin mill in Morgantown that hadn't been used for years.

Sterling became interested, salvaged enough to make another start, and moved into the tin mill on a rental basis. At the time—1940—they occupied 1/5 of the available space. Its payroll was $110,000 a year.

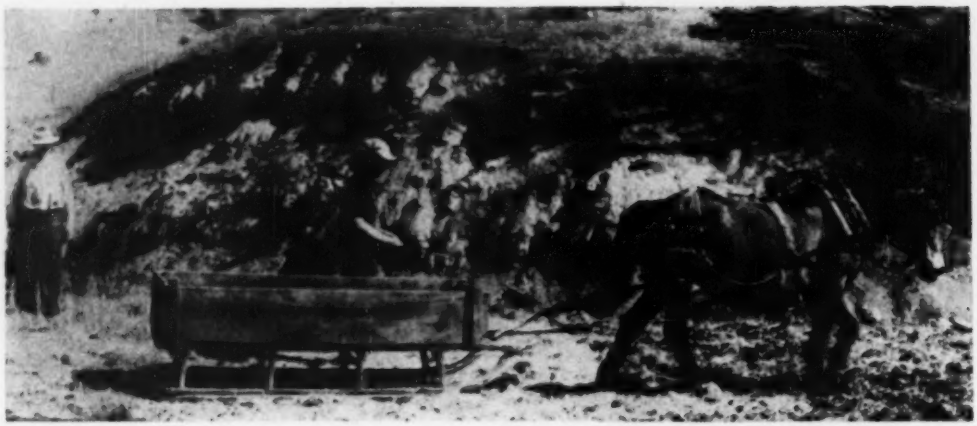
Today Sterling employs more than 1,000, and its annual payroll exceeds $3 million. It has purchased the entire building and is using all of it as well as some adjoining acreage. Recently it bought other factory property at Arthurdale and expects to start new operations there soon.

Among other firms that have come into the area since 1939 are Westinghouse Electric, Mathieson Chemical, American Cyanamid, E. I. duPont de Nemours, B. F. Goodrich, and Mercury Aircraft Corp. George Buzzerd doesn't claim that in every case his department clinched



INDUSTRIAL PROSPECT gets story on resources, housing, labor, etc. from George Buzzerd, right, as Gene Keighron looks on from left

LOCATION of likely swimming facilities in state parks is outlined by Sam Kistler for Carl Johnson, the state's conservation director



COUNTRY LIFE prize for 1952 was won by Peora, a farm community, partly for its efforts to reclaim land ruined by careless strip mining

the decision. "But in each instance," he says, "we did nobly."

Working closely with Buzzerd is the commercial counselor, John F. Hopkins; housing counselor, E. L. Keighron; and recreation counselor, C. S. "Sammy" Kistler.

Hopkins' chief responsibility is market research which includes determination of trade areas, ascertaining what products being sold in the territory might be produced locally, and helping to develop new markets for local products. He prepares market studies for interested industries, organizes sales training classes for industrial houses, fits retail sales people for their work, and maintains a merchandise file available without charge.

Keighron has collected a complete file on all types of housing. With this information he has advised communities in surveying their housing problems and planning methods of solving them; and through the "House of the Month" has assisted many persons in obtaining plans for attractive, low-cost homes.

Kistler has two responsibilities: To help communities develop recreational facilities, and to make the territory more attractive to the tourist trade. More than playgrounds and swimming pools, a well-rounded recreation program, according to Kistler, means evening and summer-time use of schools and churches for community-wide projects. He helps fit such a program to what is wanted and can be afforded, and then organizes athletic leagues, and trains play leaders.

His tourist trade function has been slow in taking shape. But he is encouraging erection of overnight lodging and eating places, now in scarce supply.

Agriculture Primary . . . Despite the vastness of its other activities, principal emphasis of the Territorial Development Department has always been on agriculture. This is traceable to the fact that 60% of Monongahela's customers live in rural areas.

Since 1936 farm income in the region has shot up more than 400%—a total average annual increase of $5 million above inflation. Among ways in which Monongahela has aided is by helping create 500 farm ponds to supply and conserve scarce water, planting 280,000 acres of trees under a sustained yield program, and supporting a vast rural electrification education drive (EW, July 21, p 16).

Its most significant work thus far has been done in dairy development, with which Monongahela became concerned in 1940. Its first move was to attract a milk condensery into the territory. In concert with other local businesses, Monongahela approached the Carnation Milk Co. which, at first look, couldn't see enough milk in the area to justify establishment of a plant.

Monongahela field men pitched in to survey actual and potential production. Carnation said it would be interested if something was done to develop the stated potential.

So the company, through UMVA, purchased some pure bred bulls and placed them on area farms. Bull calves sired by these bulls were in turn redistributed. Dairy education programs were also stepped up. Within two years the results were so impressive that Carnation approved the condensery for location in Clarksburg.

Monongahela was eager to do all this despite the knowledge that Carnation intended to generate its own power. In fact, the utility sent out one of its representatives, Robert Currey, to work on setting up an artificial insemination program to prop up the original bull program. He spent six months on power company money collecting $20,000 to finance an artificial breeding program and studying other breeding setups.

By 1946 the West Virginia Artificial Breeding Cooperative was in operation, with 403 members in five counties. Today it has 4,100 members in 32 counties and more than 40,000 cows have been bred to bulls of superior strain.

Other Interest . . . Supplementing its other farm work, Monongahela has sponsored two other enterprises: Farming for Better Living and the Country Life Program.

Farming for Better Living is a contest conducted annually to encourage farmers to use tested practices to make their farms more self-sufficient. It was started in 10 counties of the UMVA in 1940, with 287 farm families enrolled. Now it embraces 25 counties and 2,000 families.

Each of them gets a 36-page book, half of which is devoted to "Recommendations for a Progressive Farm Program." The other half contains questions about the

POWER COMPANY crews joined with others to clear passage for a river flowing through Glenville that had caused repeated flooding

management of the farm. All those filling out a book attend a banquet at which county—and later regional—prizes are awarded.

"If all the farmers in the state would bring their production up to the level of the contestants in FFBL," says agricultural counselor, Jim Copeman, "state farm income would be increased 2½ times."

FFBL ostensibly is sponsored by UMVA and a newer regional group in the Monongahela territory—Upper Kanawha Regional Council. However, Monongahela underwrites many of the bills and, until this year, hired UMVA's manager; in addition to which Clint Spurr has served as secretary since UMVA's inception.

Much the same applies to the Country Life Program—which is similar to promotions by other utilities, like Georgia Power Co's "Better Hometown" program. Inaugurated two years ago, Country Life is designed to assist rural communities in becoming better places in which to live. It embraces agriculture, education, recreation, religion, home improvement, and health.

Each community scores itself on its year to year progress in these fields. Depending upon its measurable progress, the community receives a certificate of merit bearing a blue, green, red, or white ribbon. Winner receives $250 to be used to advance some community project.

This year's winner was Peora, a thriving farm community in Harrison County. The town also was awarded a plaque for meriting the top prize two years in succession. It won because of its continuing program to reclaim land areas laid waste by careless strip mining, its erection of a new community center, work on picnic areas and playgrounds, and sprucing up of mail boxes and front yards.

Valuable Adjuncts . . . Profiting from such activities are two regional groups—UMVA and Upper Kanawha Regional Council—which on a smaller scale mirror the ambitions of the power company. Both are non-profit corporations devoted to social, industrial, agricultural, and economic development through private initiative.

How Monongahela works with them was aptly illustrated last year when the town of Glenville, near the headwaters of the Little Kanawha River, had to do something about floods. Three times in the preceding four months invading river waters had laid waste Glenville's business section and farm topsoil.

Object was to return the river to its natural course and allow its flow through the town without interruption. In the way were bars grown into the basin from sediment deposited by the river, and trees and brush that had spread out from the banks, catching floating debris and piling it up to form dams.

Called in by UMVA to plan and supervise the operation was Walter Gumbel, Monongahela's soil and water conservationist. The utility's publicity department went all out to help tell the story, getting it on television and radio.

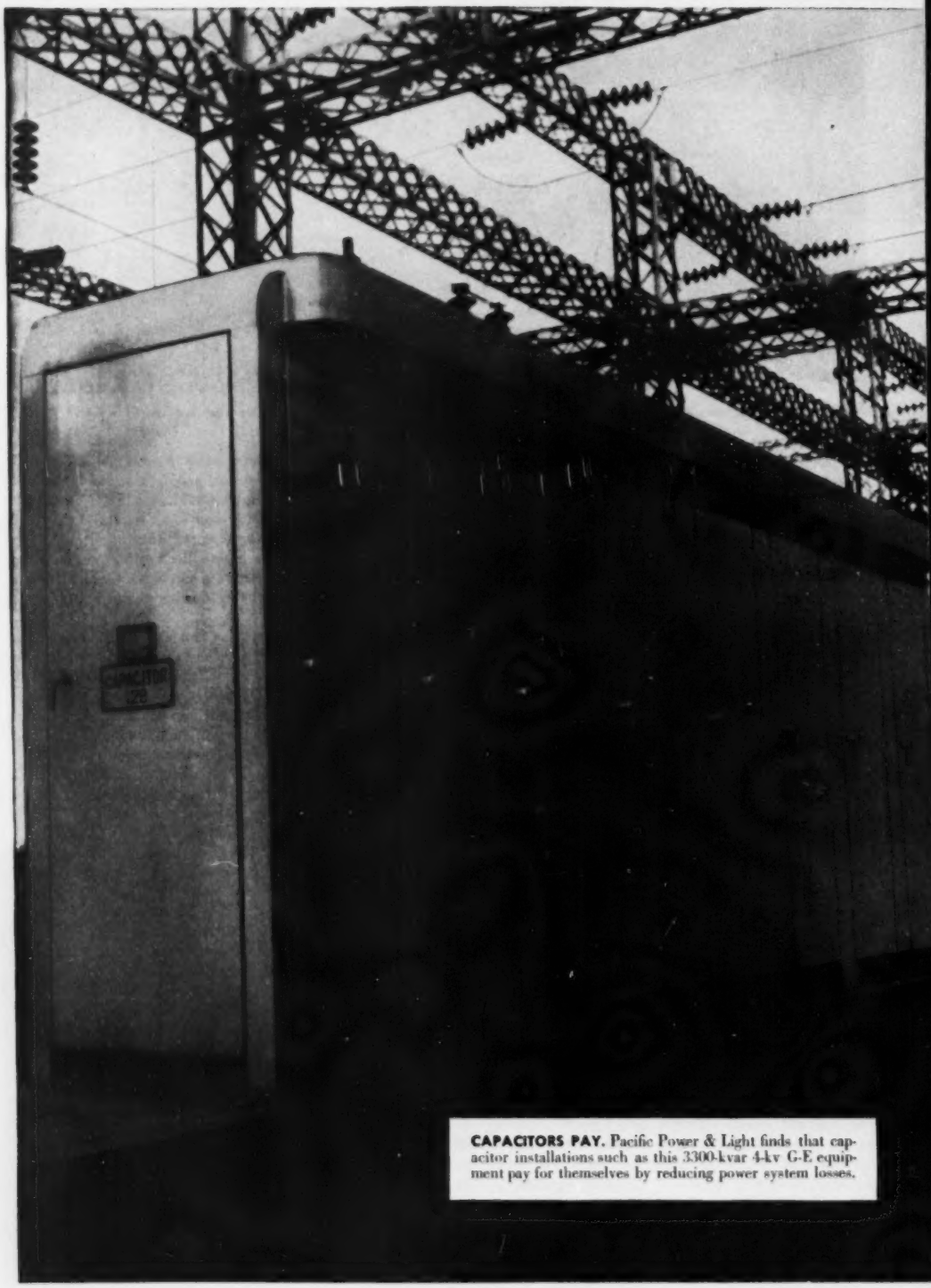
Townspeople were recruited, construction firms loaned bulldozers and other equipment, and lumber crews and right-of-way crews from the power company moved in to attack the river. In one day, at a cost of $2,000, the river was cleared. Despite some extraordinary rains, Glenville hasn't had a flood in the last year and a half.

Becoming Modesty . . . Here, as elsewhere, Monongahela eschewed credit for its achievement. "If we try to seem like the big frog in the small pond," President Spurr says, "we're inviting resentment from all the agencies we have worked with on area development."

Instead, he has his development staff work behind the scenes. He prefers that they accept minor, yet key, posts like the secretaryship of the organizations with which they are associated. Typical of these is Harry Mosebrook, forestry advisor, who is secretary of the West Virginia Forest Council, and William Handlan, overall manager of Territorial Department, who is secretary of the state's industrial editors society.

Spurr and his aides find their satisfaction in doing a big job right and thereby gaining the respect of the area they serve. Also comforting are the facts that since it undertook the development program Monongahela has doubled its customers and multiplied generating capacity and miles of line by five.

"Besides," says Spurr, "out of each dollar of customer income, 1¾¢ are spent on electricity." When he started Spurr had to settle for less than a penny.



CAPACITORS PAY. Pacific Power & Light finds that capacitor installations such as this 3300-kvar 4-kv G-E equipment pay for themselves by reducing power system losses.

Loss reduction alone pays for capacitors on Pacific Power & Light Co. system

Capacitors save 50,000,000 kw-hrs annually

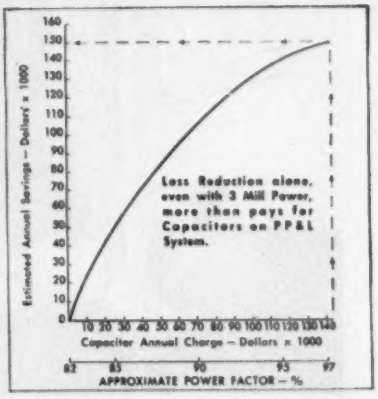
In its progressive program of power-factor improvement, Pacific Power & Light has installed 142,000 kvar of capacitors . . . 51% switched. This amounts to 1 kvar for every 2.43 kw of its 345,000-kw peak-load capacity.

Capacitors raise PF—reduce losses. Without these capacitors P P & L's power factor would be 82%—annual losses 285 million kw-hrs. In 1951, *with capacitors*, its power factor was 97%—losses 235 million kw-hrs.

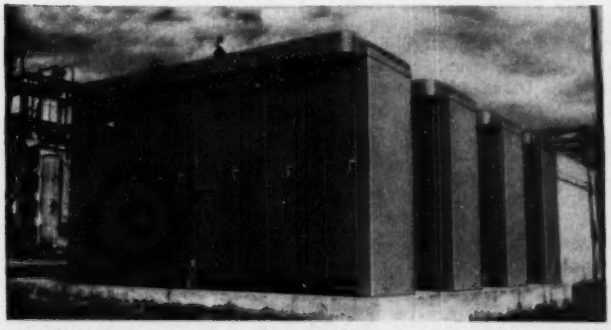
$150,000 saving pays for capacitors. Even at 3 mills per kw-hr this represents a $150,000 saving each year. Annual cost of carrying the 142,000 kvar of capacitors installed is $142,000 ($8 per installed kvar capitalized at 12½%). Thus, the saving on power losses alone more than pays for the capacitors.

Bonus of better voltage—reduced loading. Calculations show that the capacitors reduced voltage drop in overhead circuits by 23 to 48%, depending on conductor size and length. And they released an estimated 15% of kw capacity. Both at no extra cost!

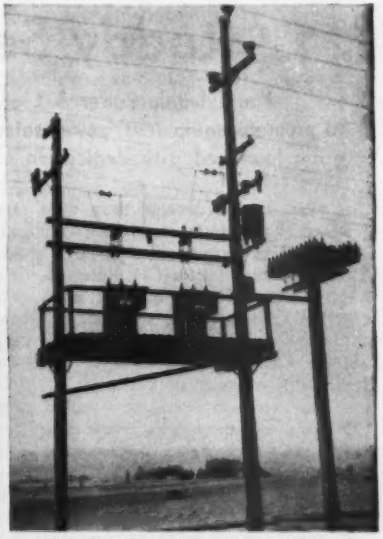
Many types of reliable General Electric capacitors are available to help you reduce losses on your system. They're economical to install, require practically no maintenance. For information call your nearest G-E Apparatus sales office, or write to Section 407-37, General Electric Company, Schenectady 5, New York.



SAVING ON LOSSES. Graph compares annual saving on losses with annual charge for capacitors as P P & L improved its power factor.



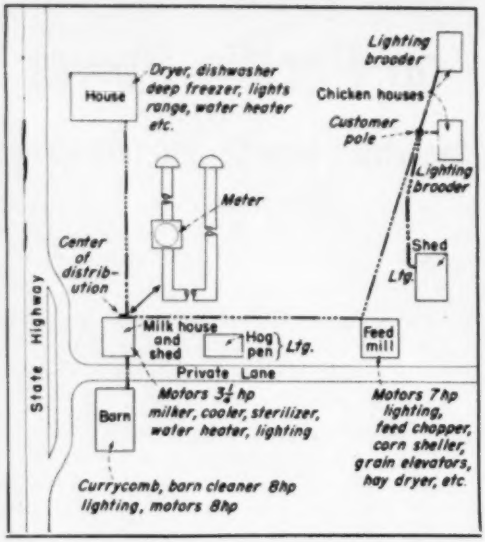
60,000 KVAR of capacitors—about 99% switched—have been installed at P P & L substations. The four 1500-kvar, 4-kv G-E equipments above are installed at the Company's Pendleton, Oregon substation. They supply bulk kilovars that reduce substation thermal loading as well as system losses.



82,000 KVAR of capacitors—about 17% switched—have been installed on distribution circuits. 600 kvar of G-E capacitors above are installed next to voltage regulators near Sunnyside, Wash.

GENERAL ELECTRIC

Reddy Kilowatt Farm citation is given E. E. Ritter by R. C. Swartz as Mrs. Ritter and Russell Dickerson of Penn State watch



For This Layout put together in the past decade and a half by the Ritters in cooperation with the farm sales department at PP&L

Reddy Sells All-Electric Farms

Pennsylvania Power & Light Co adapts industry symbol to promote equipment, power sales on farms. Continuing program launched with dedication of first Reddy Kilowatt Farm

"Last time I counted there were about 75 different kinds of electrically operated equipment around the place." These words of Ernest E. Ritter explain why his dairy farm 12 miles west of Sunbury, Pa., was dedicated last month as Pennsylvania Power & Light Co's—and the nation's—first Reddy Kilowatt all-electric farm.

The ceremony, which launched PP&L's continuing farm certification promotional campaign, was attended by several hundred neighboring farmers and leading electric industry figures. Among them was Ashton Collins, "father" of Reddy, who unveiled the first Reddy Kilowatt Farm sign and R. C. Swartz, PP&L's vice president, commercial, who presented Ritter with a citation on behalf of the utility.

The certificate recognized Ritter's farm as the first operated "in such a modern progressive manner, with the fullest possible assistance of electrical equipment, as to attain the status of a Reddy Kilowatt All-Electric Farm." It was signed by Swartz, Charles E. Oakes, PP&L president; and E. E. Mensch, vice president of the utility's Susquehanna division, who was master of ceremonies.

Others on the program were Carroll Streeter, managing editor of "Farm Journal"; Russell Gingles, farm manager for the National Electrical Manufacturers Association; and Russell Dickerson, vice dean of agriculture, Pennsylvania State College.

Gingles predicted that by 1960 farm use of electricity would equal that of the steel industry, largest energy user, while Streeter looked "to better things ahead, when people will view 1952 as being as primitive electrically as 1902 now appears."

Following the formal program, PP&L served a buffet luncheon, and visiting farmers were escorted through the farm and home while Mr and Mrs Ritter demonstrated many of the electrically-operated appliances and machines. It all fitted into the pattern of the year-round rural electrification promotion begun by PP&L this year.

Selling Scheme . . . Idea for adoption of the Reddy Kilowatt symbol as part of its all-electric farm promotion dates back to late 1951 and is the brainchild of R. T. Jones, farm sales manager. He and his associates reasoned that since 97% of PP&L's 38,000 farm customers were within reach of its lines, a good proportion of them could be encouraged to go all-electric.

Implementing the idea, they established minimum electric equipment requirements which farmers had to meet to qualify for a RK citation and sent out promotional material to all farm consumers. Listed on the next page, the requirements apply to dairy, poultry, stock, crop, or specialized farms, including combinations thereof.

At a farmer's request, one of the company's farm representatives will re-

view the electrical installations on a farm. His findings are submitted to a board of judges which determines whether the farm meets all qualifications.

If a farm passes the acid test, the company will undertake appropriate dedicatory ceremonies. These will be similar to those at the Ritter farm, though of a more local flavor. Press and radio people will help publicize it, and farm organizational leaders and county agents will be encouraged to refer folks to a Reddy Kilowatt farmer.

Of more significance is the presence of the individual farmers at the dedications and demonstrations. They will see firsthand what electricity can do to ease their work burden. According to Jones, the company expects to convince a large proportion of its farm customers by demonstrations at the dozen or so farms that should merit RK recognition before the year is out. Prospects will be shown the RK farms, and, as further testimony, the words of RK farmers will be used in company advertising.

"The continuing program ought to see many of them going all-electric before too long," Jones predicts. He also envisions that similar progress ought to be made by other utilities which already have inquired about PP&L's Reddy Kilowatt program.

Showpiece . . . The first Reddy Kilowatt farm, which was visited by 300 area farmers shortly after its dedication, has a connected load of 46 kw. (see table) and is served by a 11-kv line. Its monthly consumption is 3,200 kwhr costing $55.

A Reddy Kilowatt Farm Must Have

HOME (all types of farms)

Laundry equipment	Range
Water heater	Freezer
Refrigerator	Dishwasher
Pressure water system	

DAIRY FARM

Pressure water system	Milker
Dairy water heater	Cooler
Milk house heater	Ventilation
Outdoor lighting	Barn cleaner
Drinking cups	Hay finisher

POULTRY FARM

Pressure water system	Water warmers
Lighting (poultry house)	Brooders
Automatic waterers	Automatic feeders
Egg grader, candler, cooler (for layers)	Outdoor lighting

GENERAL FARM

To be cited according to individual merits

What First One Has

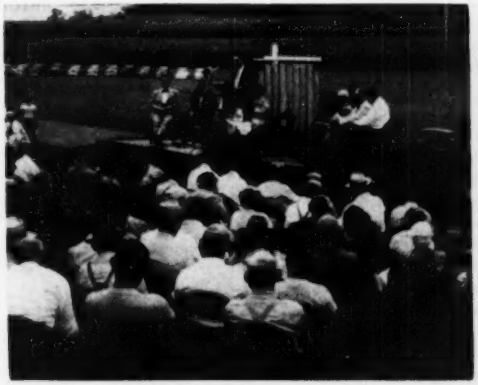
	KW demand
Laundry equipment	3
Water heater	4
Refrigerator	1
Range	8
Freezers	1½
Dishwasher	½
Pressure water system	½
Dairy water heater	3
Milk house heater	2
Lighting	5
Milker	1
Cooler	½
Barn cleaner	3
Hay finisher	8
Poultry brooders	3
Miscellaneous	2
Total demand	46

In the workshop, electricity runs a grindstone and emery wheel motor, and an electric drill. The milk house includes a milker, hot water heater, pump, 12-can cooler, sterilizer and heater, air compressor, battery charger, and soldering iron. The chop house has an electrically driven feed chopper, motor-driven corn sheller, grain elevators, and air compressor.

Electricity also operates three chick brooders, hay dryer, seed cleaner, baling elevator, ventilator fans, clippers, currycomb, fly sprayer, barn cleaner, two 1-hp elevator motors, fly traps, infra-red lamps, and yard and barn lighting.

Though the Ritters have placed primary emphasis on purchasing labor-saving productive equipment (the barn cleaner alone saves 90 minutes daily), they haven't overlooked home conveniences. Scattered about the house are a 40-cu ft farm freezer, hot water heater, washer, dryer, dishwasher, ironer, two electric mixers, toaster, forced-air cooling system, two fans, deep well cooker, vacuum cleaner, waffle iron, two coffee pots, two corn poppers, movie projector, three radios, electric razor, hair dryer, heating pad, waxer, floor sander, and a four-station inter-communication system from the house to outer buildings.

Mrs Ritter, who has supervised most of the buying as the need for particular equipment arose, would hate most to part with the washer, "which permits me to attend to several other things besides dirty clothes on Mondays." Next most indispensable, she says, is the range—the third she has owned since 1938. Pennsylvania Power & Light Co stands ready to make it a fourth, should the need ever arise.



DEDICATORY CEREMONIES were seen by many farmers . . .

MOST OF WHOM stayed to watch Ritter demonstrate equipment

ROUND TABLE discussions with their department heads and bureau heads make it possible for Consolidated Edison Co's new foremen to work out mutual problems and also enable them to secure a clear picture of their functions and responsibilities within the company

Learning More About Their Company

Con Edison foremen are briefed on the utility's organization and policies and trained in supervisory techniques

A Foremen's Conference which analyzed the organization of Consolidated Edison Co of New York and provided training in supervisory techniques was completed recently by 60 foremen in the Outside Plant Construction Department of the company.

Major goals of the conference were to encourage the men to think of themselves as part of management and to increase their effectiveness as leaders.

New Foremen Created . . . An expanding construction program which will total half a billion dollars by 1954 has necessitated creation of many new foremen since 1947. Although these men all have long experience with the company, the OPC believed they would benefit from a broader knowledge of its operations and from a more complete understanding of company policy. They would gain confidence, it was felt, from training in supervisory methods.

Full use of company facilities and personnel was made to accomplish the program's objectives. F. C. Shaughnessy, manager of OPC, keynoted each week-long session for the five groups of twelve who participated, and joined them again Friday afternoon for extended bull sessions.

Departmental bureau heads and others with specialized knowledge described the work of their bureaus and how they fitted into the department's operations. The department's extensive job-training program was explained and the schools inspected. Operating procedures for the company and the department were gone over carefully. Staff functions were discussed, particularly those connected with cost accounting and personnel procedures.

Conference Method Used . . . With small groups devoting a full working week to the program, it was possible to utilize the conference method of discussion, combining it with presentation of new material by qualified men. For example, a bureau head would present the work of his department, explain its procedures, and relate his bureau to others. The foremen then used their experience to try to work out with him better ways of doing things that required the cooperation of various bureaus or got from him answers to questions which had bothered them as they had come in contact with his bureau.

Round-table discussions of mutual problems proved particularly useful in the examination of company personnel procedures and policies and in the discussions of cost accounting. The time allotted to these subjects was found insufficient for the first group, and succeeding groups had greater opportunity to explore these fields. Discussions of personnel matters were combined with training films for supervisors to enable the men to develop supervisory techniques in line with company policies. Knowledge of accounting methods brought greater awareness to the men of the part they played in efficient operation.

Field Trips . . . Field trips each day to the scene of company operations and exhibits introduced the men, often for the first time, to factors in their day-to-day jobs of which they were aware but had never seen. For example, Con Edison's Emergency Despatching Center, known throughout the company as "No. 9", was only a telephone number to most of the men. A trip to the Center and the System Operator's Board showed the men how they were tied to the whole system through their departmental control desk. What happens to equipment and cable handled by the department became clearer when the men visited the salvage and transformer shop and the meter shop.

In addition to the films on supervision, the men viewed another on mechanized equipment used on the company's electric and gas distribution systems.

Material for the conference was worked up under the direction of R. I. Amson, assistant general superintendent of the Inspection and Methods Bureau, OPC. He was aided by group leaders W. H. Wallace and C. C. Simpson, Jr.

Whatever your utility body needs may be . . . from a set of compartment sections for a pick-up truck to a line body capable of handling the largest construction job . . . there's a POWERS-American Body designed to meet your requirements.

Available for construction, maintenance, and service work in all phases of the public utility industry, POWERS-American Bodies are "job-engineered" to step up crew efficiency and lower operation costs. Their quality construction guarantees long life and trouble-free service.

Whether your needs be large or small, standard or special, you'll find it a real economy to call POWERS-American . . . the 1 source for all types of utility bodies and equipment.

Look at all the features you get in POWERS-American Bodies

"Job-engineered" design • Equalized load distribution • Extra large weathertight compartments • Triple-seal compartment doors • Recessed slam-action door catches, with cylinder locks keyed alike • Additional line body features include: low-positioned rubber goods compartment • Full-size compartments on street side • Derrick stowed without interference to cab door or loss of compartment space • Extra depth in all compartments • Horizontal compartments for long material.

"THE ACCEPTED STANDARD WITH UTILITIES EVERYWHERE"

POWERS American DIVISION

McCABE-POWERS AUTO BODY COMPANY
5900 NORTH BROADWAY • ST. LOUIS 15, MISSOURI
WESTERN OFFICE: 428 LATHAM SQ. BLDG., OAKLAND 12, CALIF.

Mutual Fund Likes Utility Stock

Wellington holds more stock of electric power companies in its portfolio than that of any other industry

An increasing number of mutual funds are buying electric company securities today, particularly the preferred and common stocks. They realize that these securities will hold up as well in "bad times" as they do in "good times."

Among these are the $220-million Wellington Fund, one of the largest mutual investment companies in the country. It is also one of the oldest, having been incorporated in December 1928.

Largest Single Equity Investment . . . This fund increased its holdings of electric company common stocks by $2,177,500 in the first half of this year, bringing its total investment in this industry on June 30, 1952 to $20,074,750, the largest single equity investment of the fund in any one industry. This compares with an investment by the fund of $17,907,250 at the start of the year.

In the first half of 1952, the only new common stock investment in the electric industry made by the fund was the purchase of 36,000 shares of Pacific Gas & Electric Co which at June 30, 1952 had a market value of $1,219,500. The fund also made purchases of additional common stock of companies in which it already had an investment.

New Preferred Purchases . . . The fund purchased as new investments the following preferred stocks:

Shares	Company	Dividend
3,000	Central Illinois PS	5¼ %
5,000	Illinois Power	4.70
6,559	Kansas City P&L	4.50
3,000	Rochester G&E	4.75

In bonds, the only one the fund added as a new investment was $500,000 of Long Island Lighting Co 3% first mortgage bonds due in 1958.

Principal addition to previous holdings was the purchase of 30,000 shares of Commonwealth Edison Co $1.32 preferred stock. Principal reductions included the sale of 5,000 shares of Texas Utilities Co common stock and 3,900 shares of Texas Electric Service Co $4.00 preferred stock.

The fund eliminated during the first half of 1952 its holdings of 1,500 shares of Illinois Power Co 4.26% preferred stock and $224,000 of American & Foreign Power Co 5% bonds due in 2030.

Electric Company Common Stock Held by Wellington Fund on June 30, 1952

Company	Shares	Market Value
Atlantic City Electric	30,000	$ 783,750.00
Central Illinois Public Service	30,000	562,500.00
Central & South West Corp	58,000	1,080,250.00
Consolidated Edison Co of New York	50,000	1,737,500.00
Consumers Power	30,000	1,065,000.00
Delaware Power & Light	25,000	596,875.00
Florida Power & Light	18,000	515,250.00
General Public Utilities Corp	35,000	805,000.00
Gulf States Utilities	20,000	485,000.00
Illinois Power	26,000	968,500.00
Kansas City Power & Light	52,500	1,496,250.00
Middle South Utilities Inc	45,000	1,046,250.00
New York State Electric & Gas	33,000	1,117,875.00
Niagara Mohawk Power	50,000	1,318,750.00
Ohio Edison	18,000	618,750.00
Pacific Gas & Electric	36,000	1,219,500.00
Public Service of Indiana	35,000	1,089,375.00
Shawinigan Water & Power	7,000	307,125.00
South Carolina Electric & Gas	55,000	563,750.00
Texas Utilities	20,000	775,000.00
Virginia Electric & Power	50,000	1,187,500.00
Wisconsin Electric Power	30,000	735,000.00
Total Common Stock Investment		**$20,074,750.00**

PUC Commissioner

Rae S. Laraba recently was appointed a member of the New Hampshire Public Service Commission to fill the unexpired term of Edgar H. Hunter who resigned. Laraba has served the PUC as special commissioner in several rate cases, and was secretary of the legislative commission which redrafted the Public Utilities Law enacted by New Hampshire in 1951.

Ohio Utility Stockholders Extend Debt Amendment

Preferred stockholders of Columbus & Southern Ohio Electric Co have approved a five-year extension of the charter amendment increasing to 20% of capitalization the amount of temporary debt which the company may have outstanding. Expiration date of the amendment now is March 31, 1958.

Holders of 81,348 preferred shares, or 78.34% of the outstanding stock, voted in favor of the amendment and only 1,794 shares, or 1.73% of the issue, voted against it.

Company's borrowings from banks amounted to $12,375,000 on Aug. 12, 1952, compared with a maximum of about $19 million permitted by the charter amendment.

Today in Utility Finance

YIELDS (%)

Quality	Bonds			Preferred Stocks			Common Stocks		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
DATE									
1952									
Aug. 21	**2.97**	**3.02**	**3.16**	**4.06**	**4.27**	**4.62**	**5.25**	**5.57**	**6.11**
Aug. 14	2.97	3.02	3.15	4.07	4.27	4.63	5.28	5.58	6.04
2nd 1952	2.95	3.00	3.09	4.05	4.31	4.60	5.38	5.85	6.42
1st 1952	2.95	2.99	3.13	4.11	4.29	4.66	5.35	6.03	6.47
4th 1951	3.02	3.07	3.21	4.32	4.50	4.91	5.42	6.18	6.84
3rd 1951	2.87	2.91	3.04	4.05	4.27	4.61	5.52	6.24	7.05

Data: Reis & Chandler, Inc.

EARNINGS

Company	Period Months	Ended	Net Income 1952	Net Income 1951	Earnings Per Common Share 1952	Earnings Per Common Share 1951
Arkansas Power & Light	12	July	$5,803,943	$4,330,446	$....	$....
California Oregon Power	12	July	2,393,109	2,408,555	....	....
Carolina Power & Light	12	July	6,679,843	6,380,294	....	....
Central Illinois Light	12	July	2,950,294	3,169,846	2.72(a)	2.96(a)
Cleveland Electric Illuminating	12	June	12,096,925	11,049,230	3.93	3.55
General Public Utilities and subsidiaries	12	June	16,840,352	14,906,615	1.98(b)	1.76(b)
Louisiana Power & Light	12	July	2,818,737	2,842,775	....	....
Mississippi Power & Light	12	July	3,450,167	2,869,435	....	....
New York State Electric & Gas	12	July	7,317,524	5,609,270	2.32(c)	3.09(c)
Ohio Edison and subsidiary	12	July	14,760,334	14,425,649	2.74(a)	2.71(a)
Pennsylvania Power	12	July	1,983,194	1,681,546	....	....
Portland General Electric	12	July	3,604,061	3,351,353	2.70(c)	2.68(c)
Quebec Power	6	June	335,569	298,770	.60	.54
Southern California Edison	12	June	21,572,636	18,811,634	2.82	2.78
Southern Indiana Gas & Electric	12	July	1,788,221	1,817,464	2.01(f)	2.05(f)
Texas Power & Light	12	July	7,045,093	5,458,028	....	....

Notes—(a) Based on outstanding shares at end of each period; (b) based on 8,511,179 shares; (c) based on 2,696,950 shares in 1952 and 2,179,046 shares in 1951; (e) based on 1,333,333 shares in 1952 and 1,250,000 shares in 1951; and (f) based on 685,000 shares.

FINANCING

Company and Description	Amount of Offering (000)	Offering Price	Yield to Public
WEEK OF AUGUST 21-27			
None Scheduled			
WEEK OF AUGUST 28-SEPTEMBER 3			
None Scheduled			
SCHEDULED FOR SEPTEMBER TO DECEMBER			
Bonds			**Bid Date**
Arkansas Power & Light—1st mtg 1982	$15,000	.....	Sept. 9
Duquesne Light—1st mtg 1982	14,000	.....	Sept. 22
Pacific Power & Light—1st mtg 1982	7,500	.....	Sept. 22
Central Illinois Public Service—1st mtg 1982	5,000	.....	Sept. 23
Appalachian Electric Power—1st mtg 1982	17,000	.....	Sept. 23
Washington Water Power—1st mtg 1982	30,000	.....	Sept. 30
California Oregon Power—1st mtg 1982	7,000	.....	*
Utah Power & Light—1st mtg 1982	10,000	.....	Oct. 15
Carolina Power & Light—1st mtg 1982	20,000	.....	Oct. 20
Virginia Electric & Power—1st mtg 1982	20,000	.....	Oct. 21
New Orleans Public Service—1st mtg 1982	6,000	.....	Dec. 15
Notes			
Appalachian Electric Power—serial 1956-1967	$6,000	.....	Sept. 23
Preferred Stock			
Duquesne Light—140,000 sh $50 par	$7,000	.....	Sept. 15
Central Illinois Public Service—50,000 sh $100	5,000	.....	Sept. 23
Common Stock			
Utah Power & Light—167,500 sh (to be offered to stockholders on 1-for-10 basis, record Sept. 5 to expire Sept. 25; stockholders to be allowed over-subscription privileges)	$.....	.....	.....
California Electric Power—350,000 sh	.....	.....	Oct. 1/
California Oregon Power—250,000 sh	.....	.....	*
UNSCHEDULED AND UNDER CONSIDERATION			
Bonds			
Central Hudson Gas & Electric—1st mtg 1982	$5,500	.....	.....
Alpena Power & Light—1st mtg	1,700	.....	.....

* Bids to be opened during first two weeks of October. / Merrill Lynch, underwriters.

FINANCIAL BRIEFS

Federal Power Commission has issued a supplemental order granting Mountain States Power Co, Albany, Ore., final authorization for issuance and sale of 200,000 shares of $7.25 par value common stock. The FPC order approves "as reasonable" the price of $12.6978 for the stock bid by Carl M. Loeb, Rhoades & Co, which bid the utility proposes to accept. The issuance originally was authorized on July 24 on condition that the issuance and sale could not be carried out until Mountain States amended its application in compliance with FPC's competitive bidding requirements and until the commission approved the price per share.

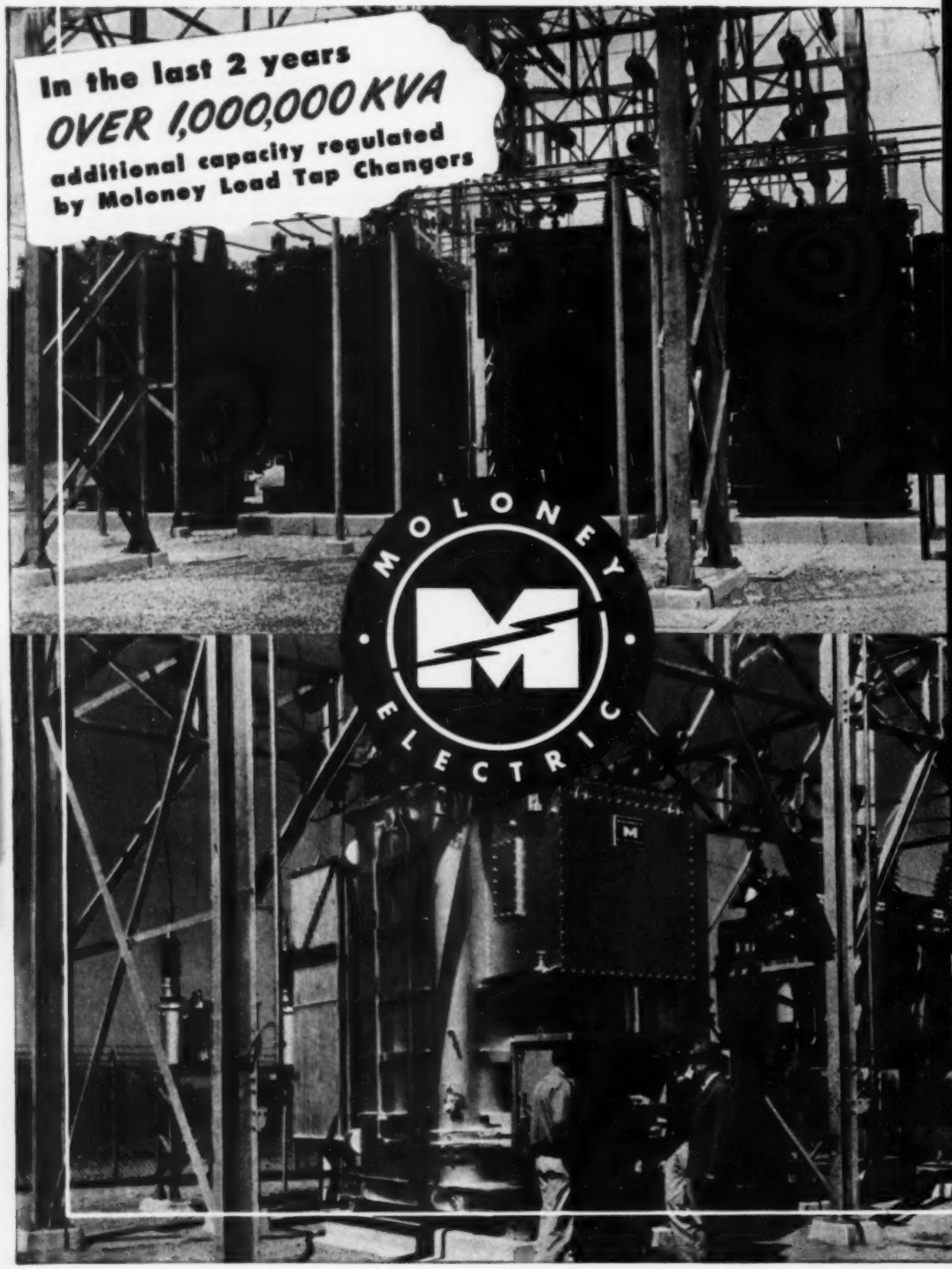
Los Angeles City Council recently approved preliminary steps to place an amendment to the city charter on the ballot in November proposing an increase in the bonding capacity of the Department of Water and Power by $41 million.

California-Oregon Power Co, Medford, Ore., has been authorized by the Public Utilities Commission to amend a credit agreement so the utility can sell $2 million in notes for construction purposes. Sale of the notes is to be made on or before Dec. 31, 1952 and to mature on June 30, 1953.

REGULATION

Pennsylvania Public Utility Commission has ordered Pennsylvania Power & Light Co to make refunds to 990 large commercial and industrial consumers. The refunds result from changes in fuel adjustment clause ordered by the PUC in February 1951. The utility was told to make refunds from Feb. 17 to the date it changes its rates to comply with the revised fuel adjustment clause. A hearing will be held to determine the amount of the refunds.

Wisconsin Public Service Corp has received Public Service Commission authorization to increase its rates by $901,000 a year. This boost will give the company a 6.16% rate of return and not a 6.6% rate of return as reported in an earlier issue of Electrical World.

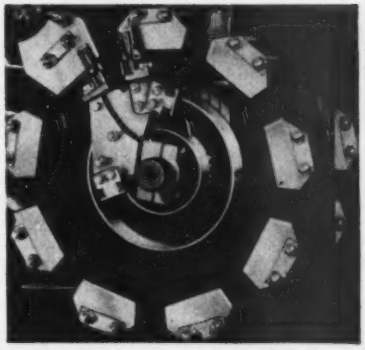

In the last 2 years
OVER 1,000,000 KVA
additional capacity regulated
by Moloney Load Tap Changers
MOLONEY
ELECTRIC

MOLONEY LOAD TAP CHANGERS

Offer these advantages for feeder voltage regulators, regulating transformers and load ratio control transformers

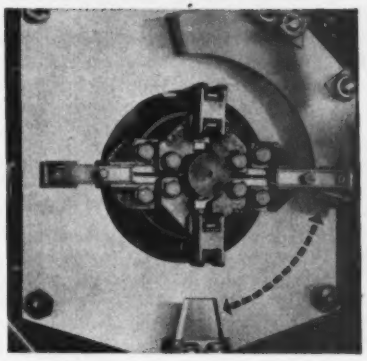
ELECTRICALLY

No arcing duty is imposed upon any of the tap selector switch contacts, avoiding the necessity for replacement due to burning or scoring. A separate switch is used for breaking load current, and a reactor in parallel with this switch during each opening and closing keeps arcing here to a minimum. Virtual elimination of arcing not only prolongs the life of the contacts but also preserves the quality of the oil in the tap changer compartment.



MECHANICALLY

The load transfer switch, which is the only switch required to transfer load current, is provided with accelerating springs and is driven by Geneva gears. The design provides a means of opening and closing the load transfer switching elements at a high rate of speed without shock to the gearing or other parts. Moloney Load Tap Changers have been inspected in the field after more than 500,000 operations and have been found to have no mechanical wear sufficient to require replacement of parts other than contacts.



MOLONEY ELECTRIC COMPANY

SALES OFFICES IN ALL PRINCIPAL CITIES • FACTORIES AT ST. LOUIS, MO. AND TORONTO, ONT., CANADA

Manufacturers of Power Transformers • Distribution Transformers • Load Ratio Control Transformers Step Voltage Regulators • Unit Substations

MOLONEY ELECTRIC = BETTER PERFORMANCE, GREATER RELIABILITY, LESS MAINTENANCE

M682-22

MANUFACTURERS & MARKETS

Tackling Engineer Shortage

Minneapolis-Honeywell uses "stretchout" plan designed to free engineers from routine tasks, boost productivity

Minneapolis-Honeywell Regulator Co has come up with a "stretchout" plan to help solve the serious shortage of engineers.

Introduced recently at the company's Industrial Division at Philadelphia, the plan frees engineers from routine tasks and provides extensive training programs designed to increase their value and productivity.

Jobs Reassigned . . . For example, an analysis of various jobs performed by engineers revealed a number of tasks that could be easily assigned to non-engineering trained personnel. Blueprinting, production scheduling, and purchasing, for instance, now are assigned to technicians, librarians, and clerks in each department.

Such time-consuming tasks as testing, quality control, and measurement have been taken over by simply making use of the instruments Minneapolis-Honeywell manufactures for industry—recording, controlling, and measuring instruments. This has resulted in adding from one to two hours a day to the productive time of each engineer in the department.

Groomed for Leadership . . . It also has encouraged the average engineer to delegate work to others. The leadership qualities this program brings out fits in closely with the company's policy to groom each engineer to assume more responsibility in preparation for rapid advancement. The engineer shortage is even more critical at the upper echelons, George Muschamp, vice president of engineering for the division, pointed out.

Muschamp cautioned, however, that the productivity of engineers cannot be increased markedly simply by eliminating, changing, or improving their daily tasks. One of the basic secrets to steady upgrading of engineers is to provide thorough post-school training. He revealed that at least 90% of the company's engineers participate in post-school education.

Integration Boosts Output . . . Better integration of the various engineering levels has increased productivity, too. He explained that the industrial engineer—the one who interprets engineering specifications and requirements for manufacturing purposes—works closely with the development engineer and the application engineer. This coordination licks manufacturing problems before they arise and corrects any design weakness early in the development stages.

The "ivory tower" complex is almost nonexistent with Minneapolis-Honeywell engineers, according to Muschamp. He said, "They work closely with our sales department and customers. This, we believe, encourages them to think on management level, to consider overall company problems in a practical sense, and thus render more mature decisions."

Proof that the "stretchout" plan is helping the company get maximum mileage from its engineers is indicated in the fact that it has enabled the engineering staff—now some two-and-one-half times larger than in 1946—to handle three times the volume of work.

General Electric Drops Its Cable Accessory Line

General Electric Co will cease the manufacture of accessories and potheads required for the installation of oil-gas filled and solid paper cables effective Jan. 1, 1953.

Simultaneously G&W Electric Specialty Co, Chicago, announced extension of its line to include accessories based initially on designs by GE.

B. F. Ilsley, general manager of GE's wire and cable department, stated that the decision to withdraw from this market was reached at the time the announcement of the discontinuance of GE paper cables was made in December, 1951, but the company has continued to manufacture accessories needed in important high voltage cable systems until the entire line was available from other experienced and reliable manufacturers.

Effective immediately, orders for oil-filled reservoirs, pressure relays, spreaders, gas cabinets and valves, tapes and compounds, and other accessories of this nature previously furnished by General Electric may be referred to G&W Electric Specialty.

Refined Copper Stocks Increase During July

Stocks of refined copper held in the United States by members of the Copper Institute, Inc, at the end of July amounted to 73,657 tons, an increase of 2,801 tons above the 70,856 tons held on June 30.

During July deliveries to domestic fabricators rose to 115,179 tons compared with deliveries of 98,416 in June. Refined production for the month of July increased to 96,049 tons from 92,151 tons reported for June.

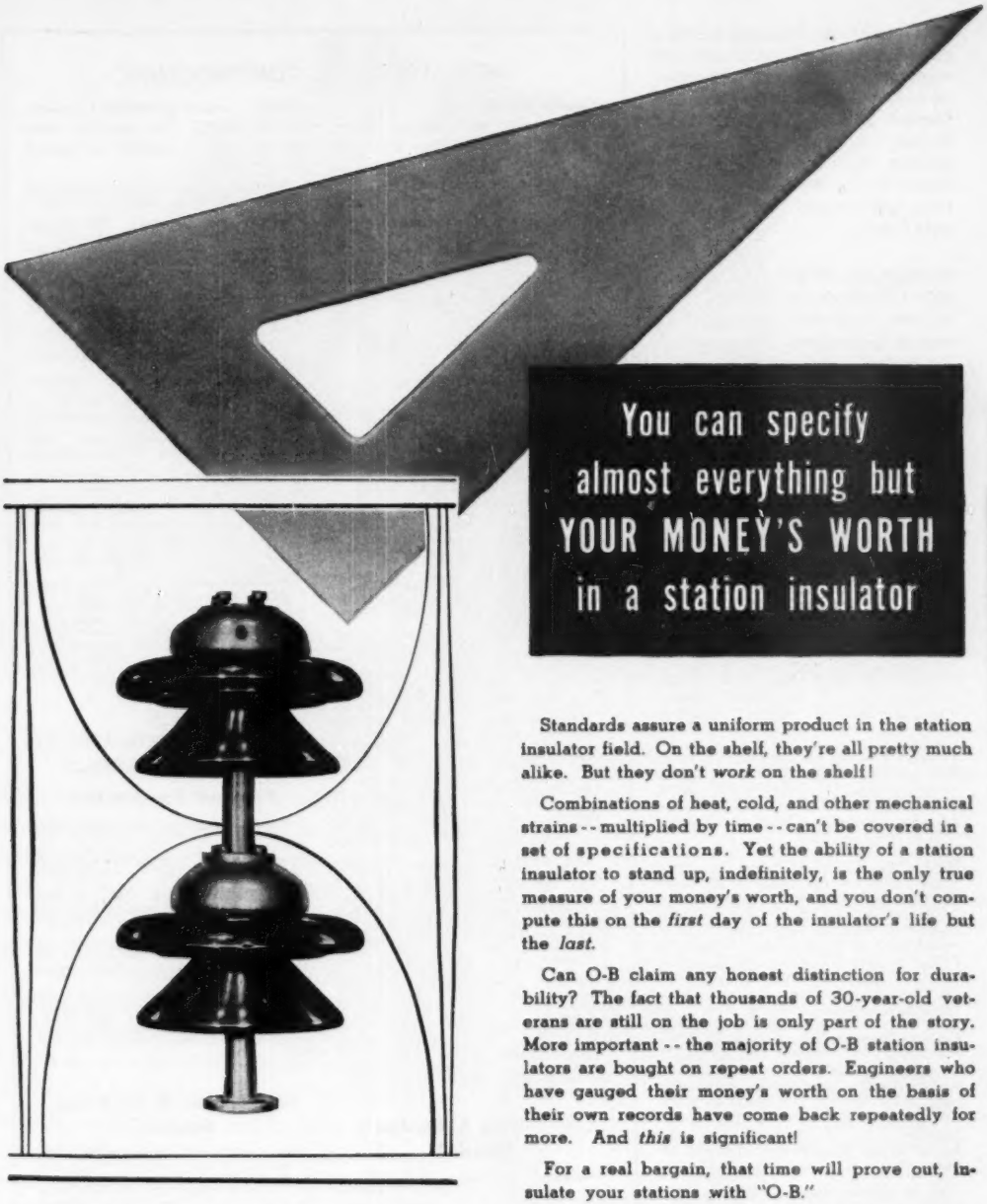
Outside the United States refined stocks totaled 180,392 tons on July 31, a decrease of 12,211 tons below the 192,603 tons on June 30. July deliveries dropped to 86,345 tons from 88,676 tons in June and refined production for the month of July was 99,201 tons compared with June's 114,421.

Aluminum Output Record Set for First Half of '52

Aluminum industry in this country produced 17% more of the metal in the first half of 1952 then it did in the first six months of 1943 when World War II production was at its peak. June primary production of 154,952,241 lb brought the six-month total to 923,072,606 lb, a gain of 14½% over the same period in 1951, and almost 13% more metal than the industry produced in the entire year of 1946. The June total was 4% under the May output of 161,607,096 lb, bringing the second quarter's total to 470,319,064 lb.

MANUFACTURING BRIEFS

From the 5,000 corporation annual reports for 1951 judged in the Twelfth Annual Survey sponsored by "Finan-



You can specify almost everything but YOUR MONEY'S WORTH in a station insulator

Standards assure a uniform product in the station insulator field. On the shelf, they're all pretty much alike. But they don't *work* on the shelf!

Combinations of heat, cold, and other mechanical strains -- multiplied by time -- can't be covered in a set of specifications. Yet the ability of a station insulator to stand up, indefinitely, is the only true measure of your money's worth, and you don't compute this on the *first* day of the insulator's life but the *last*.

Can O-B claim any honest distinction for durability? The fact that thousands of 30-year-old veterans are still on the job is only part of the story. More important -- the majority of O-B station insulators are bought on repeat orders. Engineers who have gauged their money's worth on the basis of their own records have come back repeatedly for more. And *this* is significant!

For a real bargain, that time will prove out, insulate your stations with "O-B."

Ohio Brass

MANSFIELD, OHIO, U.S.A.

4238-H

cial World," the following electrical equipment companies were cited with merit award certificates: Allis-Chalmers Manufacturing Co, Elliott Co, General Electric Co, I-T-E Circuit Breaker Co, Kuhlman Electric Co, Reliance Electric & Engineering Co, Square D Co, Westinghouse Electric Corp, and Weston Electrical Instrument Corp.

Westinghouse Electric Corp has shipped to Portland General Electric Co the first waterwheel generator built west of the Rockies. The machine is the first of 12 ordered by the utility for its Oregon City, Ore., hydroelectric generating station now being rebuilt along the Willamette River. The 11-ft-high, 22-ton vertical induction generators have a capacity of 1,200 kw.

SALES ASSIGNMENTS

COMPANY STAFFS

BullDog Electric Products Co, Detroit, has made the following appointments to its corps of field engineers: William C. Grimsley, Cleveland office; J. W. Henry, Toledo territory; R. L. Huntley, Chicago area; and John R. Sullivan, Pittsburgh office.

General Electric Co has named John K. Pike manager of its Minneapolis, Minn., apparatus sales office. Pike, formerly assistant manager there, succeeds E. M. Pinkerton, who has retired after 43 years' service with General Electric.

Hevi Duty Electric Co has transferred Elton E. Staples, vice president in charge of sales, from Cleveland to its main office in Milwaukee. Robert A. Foley has been transferred from the eastern district office in Jersey City to Chicago. Robert M. Palmer replaces Foley. George M. Brown has been appointed district manager of the Cleveland district and Robert L. King has been named sales engineer there.

General Electric Co has appointed E. C. Politi and L. C. Schaefer wire and cable specialists for the New York and Southwestern districts respectively. Politi, who came to GE in 1948, will make his headquarters at 570 Lexington Ave., New York. Schaefer, with GE since 1947, will be located in the Houston, Tex., office at 11 Japhet St.

A. O. Smith Corp, Milwaukee, has moved its New England sales operations from Boston to Springfield, Mass. The new office, under the direction of W. T. Halket, is located at 95 State St.

REPRESENTATIVES

Fisher-Pierce Co, Inc, has assigned Glenn & Larson, Charlotte, N. C, to cover North and South Carolina and eastern Tennessee. Leo P. O'Brien, New York, has been given the territory of southeastern New York state, including Manhattan, Long Island, and the northern half of New Jersey.

NEW ELECTRICAL CONSTRUCTION

A weekly selection of U. S. electrical construction projects announced by private and government utility systems involving more than $70,000. Also listed are major industrial and construction jobs where electrical work is indicated or implied

UTILITIES

Proposed Construction

Calif., Twenty-Nine Palms — Dpt. Navy, San Diego, Calif., non-portable water distr. sys. and portable storage, NOY 74038. Spec. 35073, $500,000; power transmission line, NOY 74033, Spec. 35068, $500,000; main electric substation, NOY 74027, Spec. 35092, $260,000; installing telephone system, NOY 74036, Spec. 35071, $200,000 all foregoing at Marine Corp Training Camp.

Fla., Gainesville—City, electric plant addns., $1,500,000.

Fla., Miami — Miami Broadcasting Co., Du Pont Bldg., 169 E. Flagler St., Miami television station, $1,246,680. A. D. Ring & Co., Munsey Bldg., Wash., D. C., consult. engr.

Illinois and Missouri — RADIO-RELAY SYSTEM—American Telephone & Telegraph Co., 1010 Pine St., St. Louis, 1, Mo., microwave radio-relay system to incl. four television channels between Chicago, Ill. and St. Louis, Mo., incl. erection of 9 towers ranging in height from 130 ft. to 275 ft. $4,000,000.

Ia., Storm Lake—Iowa Public Service Co., 502 6 St., Sioux City, power expansion incl. enlargement of power bldg., generating equipment, $2,700,000.

La., Monroe—City, City Hall, 3 electric substations.

Mass., Charlestown—P. Wks. Office, 495 Summer St., Boston, power plant changes to incl. 7,500 kw turbo generator, $148,500; imprvs., alterations feed water heater, $121,000, Boston Naval Shipyard, Charles T. Main, Inc., 80 Federal St., Boston, consult. engr.

Minn., Hibbing—Village, P. Utilities Comn., E. A. Anderson, secy., furnish, install power plant equip., piping, electrical equip., wiring, municipal power plant, Pfeifer & Schultz, 702 Wesley Temple Bldg., Minneapolis, engrs.

Missouri—Sho-Me Power Corp., c/o J. W. Haugh, pres., Marshfield, 46.18 mi. rural distr. lines, Phelps, Crawford and Franklin Counties. Proj. M0 59DF-Cole. Plans deposit $10. Frank Horton & Co., Lamar, engrs.

N. Y., Idlewild—At office of the Chief Engineer of the Port of New York Auth., 111 8th Ave., New York, Zone 11, electrical installation and the const. of a switch house for Runway D and associated taxiways at New York International Airport. Cont. NYA-260.002. Plans deposit $25.

Utah, Provo—Utah Power & Light Co., Kearns Bldg., Salt Lake City, hydro-electric power plant at Deer Creek Res. Dam, $600,000. J. A. Hale, Kearns Bldg., Salt Lake City, consult. engr.

Wyoming — Bureau Reclamation, Dpt. Interior Boysen, Boysen Dam Transmission line-connecting road, Missouri River Basin Proj. Spec. 601C-24. L. N. McClellan, Bldg. 1A, Denver Federal Center, Denver, Colo., ch. engr.

Low Bidders & Contracts Awarded

Alabama - Kentucky - Tennessee — Tennessee Valley Authority, Sprakles Bldg., Knoxville, Tenn., awarded contracts for Colbert Steam Plant, Pickwick Reservoir, Ala., Shawnee Steam Plant, Ky., and Kingston Steam Plant, Tenn. Total $63,297,821.

General Electric Co., River Rd., Schenectady, N. Y., 4 turbogenerators, transformers, reactors, oil breakers.

Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa., transformers, switchboards, oil circuit breakers.

Babcock & Wilcox, Barberton, O., 6 boilers at Colbert and Shawnee Plants.

Combustion Engineering-Superheater Inc., 200 Madison Ave., New York, 16, N. Y. 2 boilers for Kingston Plant.

Byron Jackson Co., Vernon Blvd. at Thomas St., Los Angeles 54, Calif., boiler feed pumps.

Foster Wheeler Corp., 165 Broadway, New York, N. Y., condensers.

American Blower Corp., Tireman Ave. at Roselawn St., Detroit 23, Mich., draft fans and fly ash collectors.

Sturtevant Div., Westinghouse Electric Corp., 27 Readville St., Hyde Park, Boston 36, Mass., forced and induced draft fans.

Worthington Corp., 426 Worthington Ave., Harrison, N. J., condenser circulating water pumps and deaerating feedwater heaters.

American Locomotive Co., Dunkirk, N. Y., feedwater heaters.

Allis-Chalmers Mfg. Co., 864 S. 70 St., Milwaukee, Wis., transformers and reactors.

I-T-E-Circuit Breaker Co., 1900 Hamilton St., Phila. 30, Pa., switchboards.

Ingersoll-Rand Co., 11 Broadway, N. Y. 4, N. Y. boiler feed pumps.

Buell Engineering Co., Inc., 70 Pine St., New York, N. Y., fly ash collectors.

Lummus Co., 385 Madison Ave., New York, N. Y., heaters.

United Conveyor Co., 37 W. Van Buren St., Chicago 5, Ill., ash and dust handling equipment.

American Bridge Co., Frick Bldg., Pittsburgh, Pa., structural steel.

Custodis Constr. Co., 25 Broadway, New York, N. Y., concrete chimneys.

Kans., Kansas City—Boese-Hilburn Electric Co., 100 W. 9 St. Kansas City, Mo. LB. $407,427, power wiring, power plant imprvs., Constr. K-25. Bd. P. Utilities, City Hall, Kansas City, Kan. Bids July 23.

INDUSTRIAL, COMMERCIAL & PUBLIC BUILDINGS

Proposed Construction

Calif., Los Angeles—Anheuser-Busch, Inc., August A. Busch, Jr., Pres., 721 Pestalozzi St., St. Louis, 18, Mo., beer brewery, 65-acre site in San Fernando Valley, Los Angeles Co. near here. $15,000,000.

Calif., Los Angeles—Union Carbide & Carbon Corp., 2770 Leonis Blvd., Los Angeles, polyethylene plant, $36,000,000.

Calif., Watson—The Richfield Oil Co., 555 S. Flower St., Los Angeles, refinery expansion, fluid catalytic cracking unit. $40,000,000.

N. J., Jersey City—Jersey City Liberty Terminal Corp., sub. The Foundation Co., 57 Williams St., New York, N. Y., truck, railroad and marine terminal, Communipaw District, $27,000,000.

Low Bidders & Contracts Awarded

Ohio—Peter Kiewit Sons' Co., 1024 N. 61 St., Omaha, Neb., CA Total cost $1,200,000,000. Gaseous diffusion process uranium plant, on 6,500 acre tract on Scioto River, Pike County between Piketon and Wakefield, O., for the Atomic Energy Commission, 1901 Constitution Ave., Wash., 25, D. C. Union Carbide & Carbon Corp., 30 East 42nd St., New York, N. Y., Giffels & Vallet, Inc., 1000 Marquette Bldg., Detroit, Mich., Sargent & Lundy, 140 S. Dearborn St., Chicago, Ill., Singmaster & Breyer, 42 Lexington Ave., New York, N. Y., Smith-Hinchman & Grylls, Inc., 800 Marquette Bldg., Detroit, Mich., Burns & McDonnell Engineering Co., 9th and Troost Sts., Kansas City, Mo., Holabird & Root & Burgee, 180 N. Wabash Ave., Chicago, Ill., engineers-architects.

This is a 43¾-inch flanged ring of solid porcelain, to be installed with a matching domed manhole cover, or cap, also of solid Lapp porcelain. The elements were designed to solve the problem of quick removal and replacement of manhole opening caps in chemical brick-lined distillation columns. It is the alternate to the previous method which required tearing down and rebuilding the wall itself to gain access.

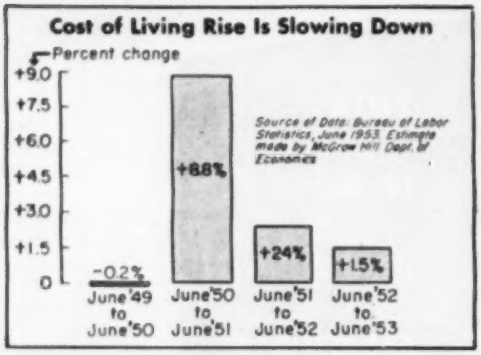
The mechanical and chemical duty imposed on such pieces in a very real way matches the mechanical and electrical requirement of similar Lapp feldspathic porcelain for high voltage service. For each application, only uniform, dense, thoroughly-vitrified, strong, pure porcelain of zero porosity will meet performance requirements.

These pieces are spectacular. We like to show them off. They demonstrate the inherent quality of Lapp porcelain. Yet at Lapp, we know there is no such thing as a "simple" piece of porcelain. A suspension disc, a fuse box, a radio tower footing, a bus support, a distribution insulator—each has a specific requirement. And to each, porcelain by Lapp brings an extra margin of operating security. Most users of electrical porcelain know that although *you can buy cheaper porcelain . . . you can't buy better porcelain* . . . than Lapp.

Lapp Insulator Co., Inc., Le Roy, N. Y.

Lapp

ELECTRICAL BUSINESS OUTLOOK



Food Prices Rising Slowly

Bigger crops despite drought will retard the increase in the cost of living. Rent and products made of metals will continue upward push

Big crops on U. S. farms promise to hold down increases in the price of food—and thus relieve the inflationary push of cost-of-living wage adjustments. Farmers expect to produce more food than in any other years except 1948 and 1949—despite the widely publicized drought.

Drought got the July and August headlines—and with some justice, the dry spell was tough on farmers. But the effect on food prices has been greatly exaggerated. The drought hit hardest in the South and Northeast, damaged mostly cotton, tobacco, and pastures rather than food for consumers.

A Most Considerate Drought . . . In fact, this was one of the most considerate droughts in history, at least for the American consumer. Dry weather skipped most of the Midwest where the key food crops grow. Iowa, for instance, expects one of the best corn crops ever. Total corn production may pass 3.2 billion bushels—9% more than last year. And a big corn crop cuts heavily into upward pressures on food prices.

Good weather is now repairing much of the drought damage. Tobacco in Connecticut and the South, and Maine potatoes, may pick up if rains continue. And pastures are already back in good condition in many areas. Good pastures—plus enough rain to grow fall feed crops—will help farmers feed their record herds of beef cattle.

Food prices are expected to rise over the next year despite these big crops. But the rise will be a slow one unless there is another drought. Right now it looks as if food will go up no more than 2%—and quite possibly less—between mid-1952 and mid-1953.

This is still inflation. But it's a far cry from the 14% rise in retail food prices in the 24 months after Korea was attacked. Food is the biggest single element in the government's "cost of living" index, and it led the inflationary push in the months after Korea.

Future prospects for food prices are good—always barring war or a really serious drought in the Midwest. Farmers are expected to turn out big crops again next year. And the supply of meat key item among the foods is excellent and probably will continue good for several years.

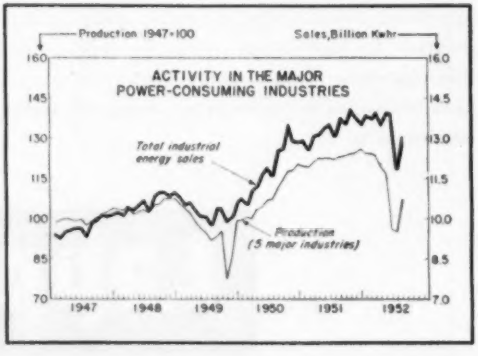
Beef prices are actually expected to average 3-4% lower this year than in 1951. There will be about 67 lb of beef and veal for every person in the country—about 4.5% more than last year. Beef is expected to go down again next year. Farmers are building up their herds, will start next year with perhaps 92 million head, compared with the record 88 million head on farms at the start of 1952.

Pork, the other key meat, now costs more than last year. Farmers saved fewer pigs this year, so the pork supply is expected to drop by about 2.5 lb per capita. But the supply should go up again next year. This year's bumper corn crop means cheaper feed for hogs and will tend to make farmers raise more hogs in 1953.

"Miscellaneous" Goods to Go Up . . . Chief upward pressure on living costs is expected to come from the "miscellaneous" category of goods in the government index. Wage increases in steel and other basic industries will be reflected in prices of finished goods, may push this group of goods up 3-4% in the next year.

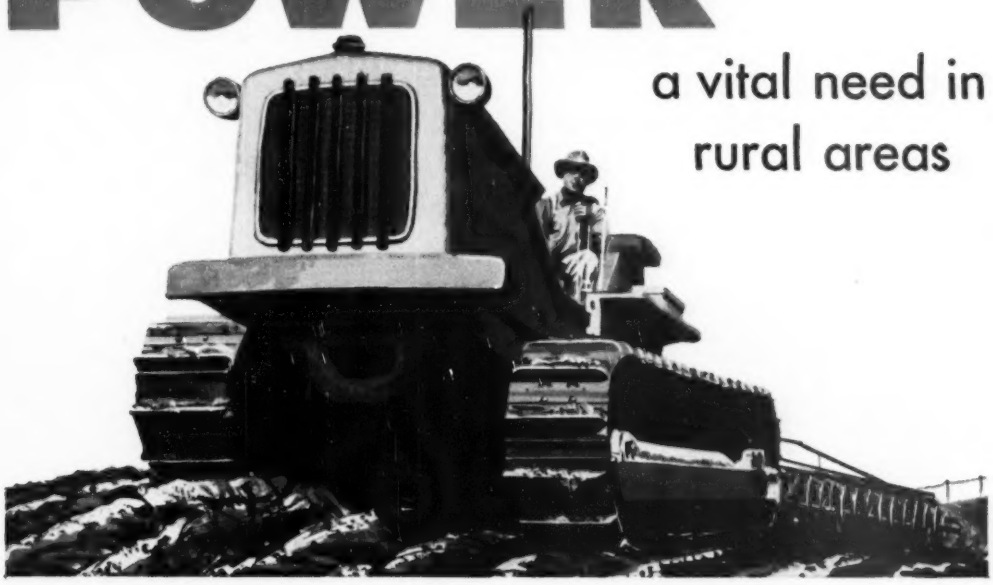
Rents will probably go up 2-3%—as they have every year. Other goods won't cost much more than they do now. Rent, fuel, and electricity will continue to be the best buys in the list of cost-of-living goods. They cost only a little over 40% more than they did in prewar years; food and clothing have gone up more than 100%.

It's still too early to tell what will happen to living costs after the middle of next year. But there are good reasons for expecting prices to come down. For one thing, food is very likely to cost less. Metals may also cost less next year. Some key nonferrous metals have already dropped in price, and further declines are expected next year. Cheaper raw materials—plus competitive selling pressures—could lower prices in 1953 of goods made of metal.



POWER

a vital need in rural areas



Anaconda understands this need. It recognizes the problems of rural power distribution. Anaconda knows that foresight and hard work on the part of the distributors of electric power have been largely responsible for overcoming these problems.

Rural power flows through ANACONDA *Conductors of copper, aluminum and Copperweld.*

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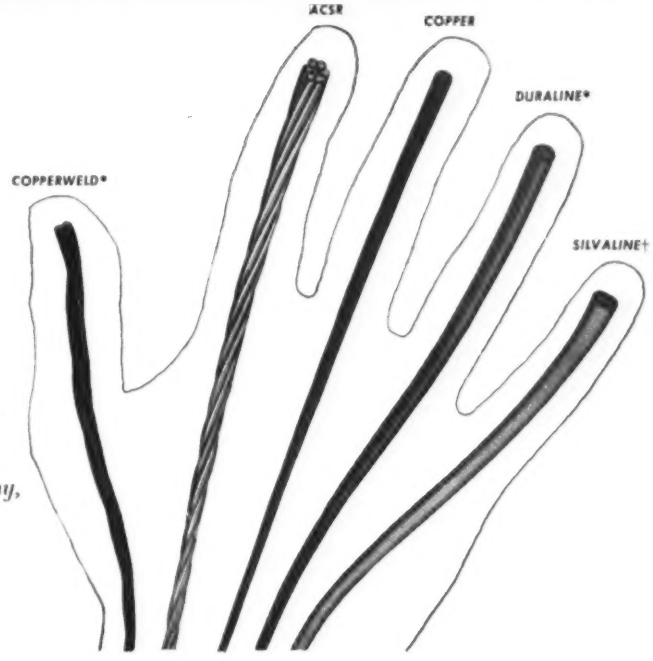

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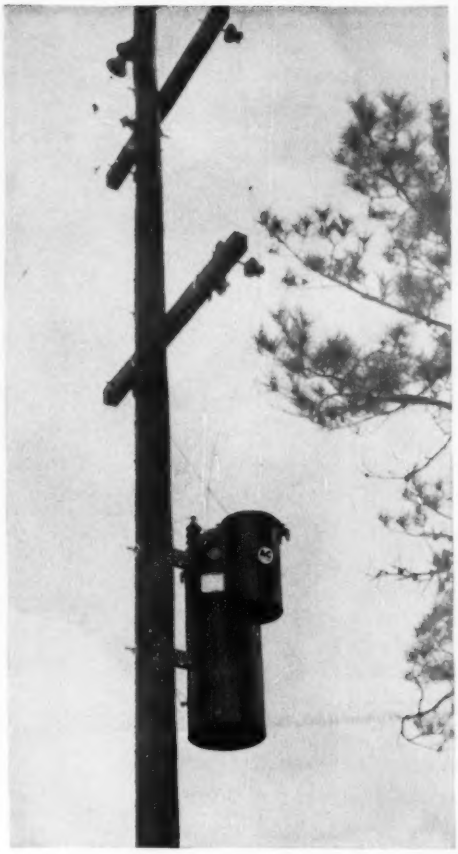
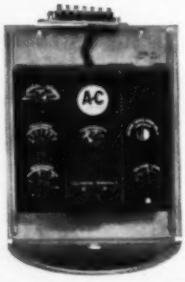
RATINGS AVAILABLE

7620 Volts—15, 50, 100 amp
5000 Volts—50, 100 amp
2500 Volts—100, 200 amp



Allis-Chalmers distribution regulator provides a narrow, accurate ± 1 volt band on a southeastern feeder.



Installation is Fast; Maintenance is Easy

"Feather-Touch" controls of Allis-Chalmers distribution regulators are one reason why installation is so fast and simple. There is only one adjustment to make: setting the voltage level. Voltage band is pre-set at the factory. A convenient calibrated scale plus a large, finger-fit knob makes setting the voltage level especially easy.

Maintenance is simplified by a single jack plug that connects all wiring to the regulator. The control can be removed and replaced in a short time. Your linemen don't have to be technical experts because the control can easily be sent back to the shop for a thorough checkup.

The complete story of "Feather-Touch" controls is contained in the booklet "Feather-Touch Controls on Allis-Chalmers Distribution Regulators," 01M7866-1. Write for it.

ALLIS-CHALMERS

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Originators of 5/8% Step Regulation